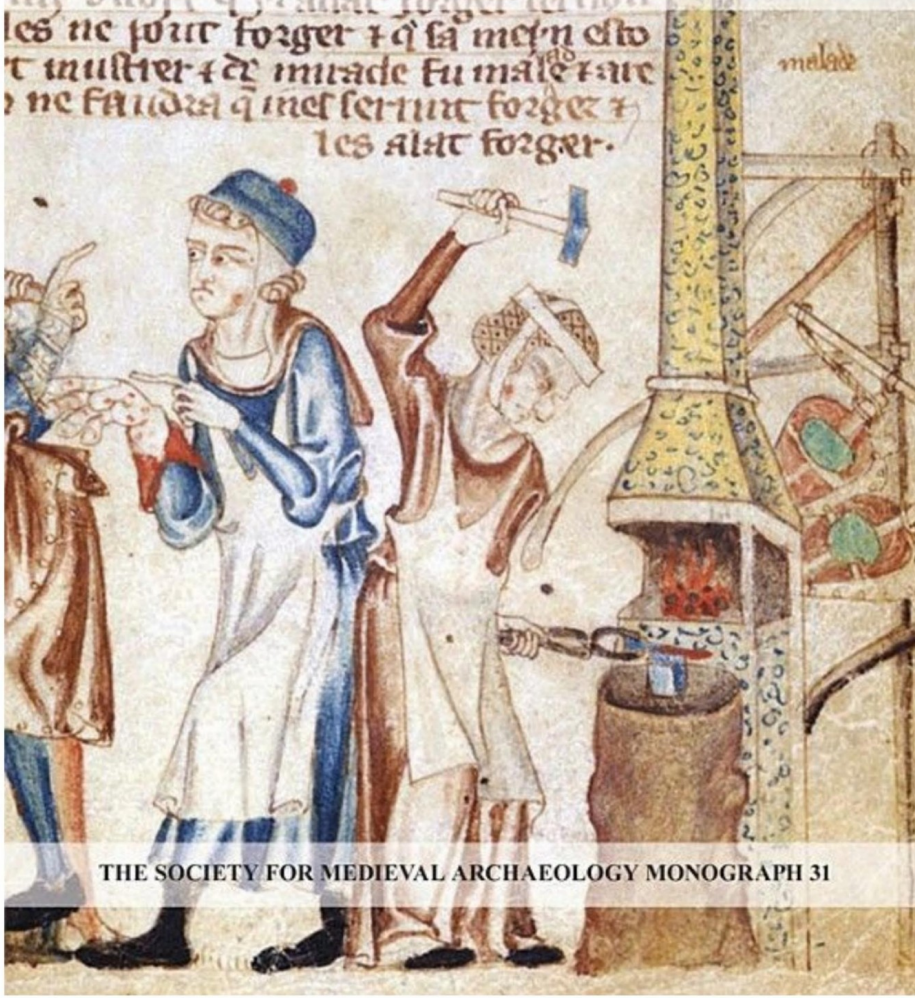
# IRONWORK IN MEDIEVAL BRITAIN

## AN ARCHAEOLOGICAL STUDY

IAN H GOODALL



THE SOCIETY FOR MEDIEVAL ARCHAEOLOGY MONOGRAPH 31

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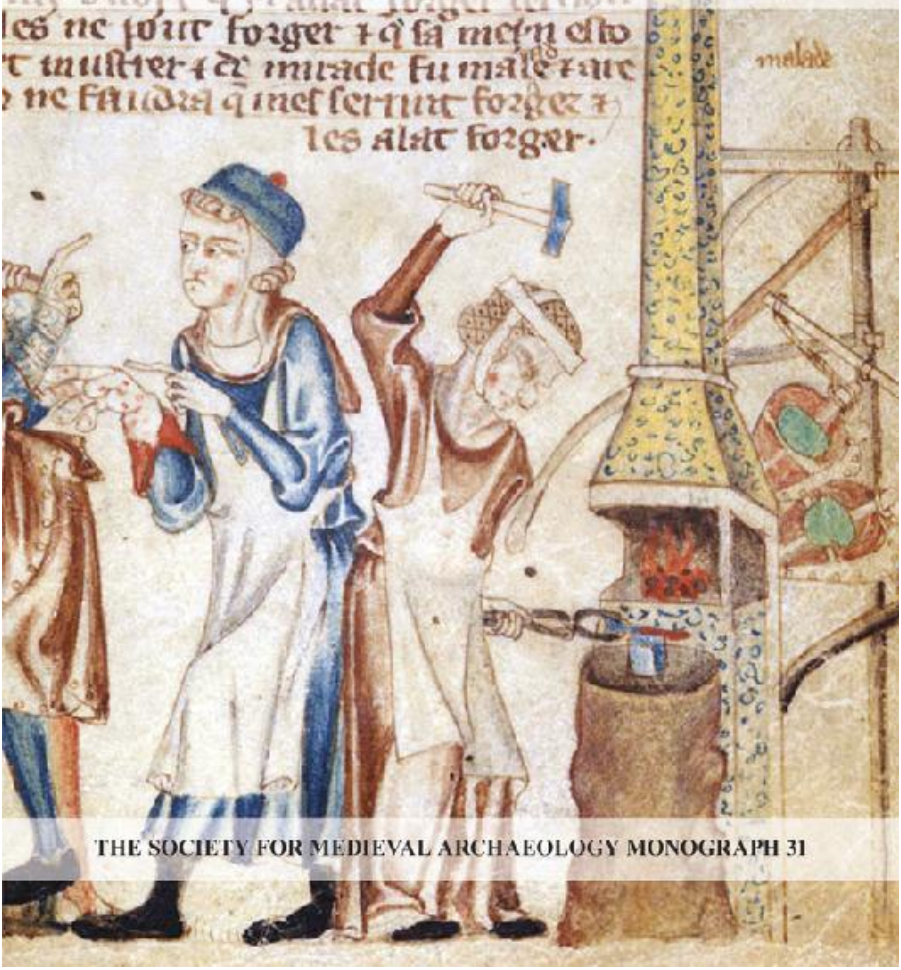

THE SOCIETY FOR MEDIEVAL ARCHAEOLOGY MONOGRAPH 31

# Ironwork in Medieval Britain

## An archaeological study

**by**
**Ian H Goodall**

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

THE SOCIETY FOR MEDIEVAL ARCHAEOLOGY
MONOGRAPH 31

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ISBN 978-1-907975-45-5 (pbk)

Edited by Christopher Gerrard

Published 2017 by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
711 Third Avenue, New York, NY 10017, USA

*Routledge is an imprint of the Taylor & Francis Group, an informa business*

This publication has been made possible by a generous grant from English Heritage

The Society for Medieval Archaeology
www.medievalarchaeology.org/publications

Cover: Image from the Holkham Bible Picture Book, *c*1325-30, © The British Library Board (Add 47682)

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# Foreword

This monograph is the publication of the late Ian Goodall's doctoral thesis on medieval ironwork in Britain which was submitted to the Department of Archaeology, University College, Cardiff, in 1980. Thirty years on, it remains the definitive survey of iron tools and other fittings in use during the period *c*1066 to 1540 AD. Exceptional in a north-western European context for its range and coverage of artefacts from both rural and urban excavations, much of the material described here was recovered during 'rescue' projects in the 1960s and 1970s funded by the State through the Ministry of Public Works and Buildings and their successors. It immediately established Ian as one of Britain's leading authorities on all things ferrous and later medieval.

Only a month before Ian's unexpected death in 2006, I met with him to discuss a report he had been preparing on the metalwork finds from Clarendon Palace in Wiltshire. As he worked his way through fragments of medieval arrowheads and knives, modern bicycle bells and lawn-mower blades, I asked why he had never published his thesis. Ian explained to me then that, after leaving Cardiff, his career with Royal Commission on the Historical Monuments of England and latterly English Heritage had been as an architectural historian rather than any strictly academic or archaeological enterprise and, although he had continued to compile reports on assemblages all the while, he had just never had the time to sit down and update his original work. By the time we had time to think more seriously about how his thesis might be brought to a wider audience, Ian had gone.

Certainly there is neither academic nor professional reason why his thesis should not now be published, indeed it is a work ideally suited to wider dissemination because it is relevant, useful, and difficult to access. The text contains almost everything necessary to identify, date and understand medieval iron objects. In scope and detail there is still no published parallel and, as such, it will be essential for almost any archaeologist working in later medieval archaeology, particularly in the fields of excavation, finds study, museums and research.

That said, a thesis serves a very different purpose to a published text and, although this monograph is faithful to the original as far as is possible, some changes have been necessary. In the first place the whole typescript was re-typed, and I am grateful for a small grant from the Society for Medieval Archaeology who paid for this task. Thereafter, English Heritage sponsored the editing, re-setting and final publication and, without their intervention, this project could not have been completed. The task of preparing the monograph

for publication has been undertaken by Alejandra Gutiérrez. The main challenge has been to update as many of the bibliographical references as possible because, of course, most references in the original thesis refer to then unpublished reports which have since appeared as articles and monographs. The dating of the Winchester finds has also been updated here in those few cases where the published reports (Goodall 1990) offer a different date to that thought correct at the time of writing the thesis in 1980. A list of Ian Goodall's major publications on metalwork is also provided arranged by date. This new bibliography should be of tremendous value to all those researching medieval metalwork and in search of further bibliography and parallels.

Finally, there have also been changes to the format. Ian's original thesis comprised three volumes: text, catalogue and figures, which were arranged into chapters according to object type, covering all types of iron artefacts and tools except weapons, armour, arrowheads and spurs. For this publication, the three original volumes have been re-combined by theme, rather than keeping the catalogue as an appendix at the end of the text. This will allow the reader to check illustrated examples and read descriptions more comfortably within each chapter and theme rather than constantly shuffling pages. Some re-drawing of the finds has also been undertaken where the quality of the originals has faded. I would like to thank Norfolk Museums and Archaeology Service for their permission to use the drawing for D1 (Figure 5.1). I am grateful too to John Clark, formerly of the Museum of London, for adding the preface.

Christopher Gerrard
October 2010

# Preface

## Ian Goodall and the study of medieval ironwork

The name of Ian Goodall is surely known to anyone who has consulted archaeological reports on medieval sites in Britain published in the last 30 years or so. It will be even more familiar – even if they never met him or benefited from his advice – to those who have themselves faced the task of contributing the small finds section to such a report. For it is impracticable, or at least unwise, to write a report on excavated medieval iron artefacts without referring to at least one and probably several of the many such reports Ian himself wrote between 1970 and his early and unexpected death in 2006. I see, for example, that I and the other contributors to a volume on medieval horse equipment from London, published in 1995, listed in our joint bibliography some seventeen of his articles; the introduction to the second edition added another. Moreover, it may be revealed, Ian was the referee asked by English Heritage to assess the merits of that publication at typescript stage. His extensive and detailed comments were of immense value to the authors.

Most of Ian's published contributions to the subject were simply titled 'Iron objects', or a variation of that misleadingly simple designation; many ran to less than a dozen pages. But their small scale belies the wealth of knowledge and experience that lay behind the author's ability to identify and to diagnose the significance of sometimes heavily corroded and not immediately recognizable 'iron objects', and to set them in their historical context.

Ian Goodall was born in York in 1948, and in 1966 went to University College Cardiff to study archaeology. After graduation, he went on to begin the research that was to culminate in the award of a PhD for his thesis *Ironwork in Medieval Britain: an Archaeological Study*. However, Ian was still engaged on this work when in 1972 he returned to York to take up a post with the then Royal Commission on the Historical Monuments of England (later to be amalgamated with English Heritage). While contributing to major and productive research and publication projects on the buildings of York and of North Yorkshire for the Commission, he made time not only to travel extensively to study groups of medieval ironwork from excavations and in museum collections, but to begin the writing of the series of specialist reports

on iron finds for which he remains so well known – the first to be published (I think) comprising the material from excavations carried out between 1970 and 1972 at Waltham Abbey, Essex.

I first met Ian when he came to London to look at ironwork in the medieval collections of the Guildhall Museum, later the Museum of London. We were agreed in our admiration of the work of John Ward Perkins, who had pioneered a new approach to the study of medieval artefacts in the *London Museum Medieval Catalogue*, published in 1940. We commiserated over the fact that the typologies and chronologies that Ward Perkins had proposed, useful though they were, were based upon so little in the way of well-dated material. Medieval ironwork in museum collections, although sometimes of high quality and individual interest, then comprised largely stray finds from building sites or from rivers, lacking any trustworthy external evidence for date or for context of use.

Major campaigns of excavation on large and productive medieval urban sites, such as those in Winchester, York and London, were to change that picture. But in the meantime there were many excavations of smaller sites, both urban and rural, which, although they individually might produce little medieval ironwork, could provide the dating and context information lacking in the old museum collections. Ian Goodall set himself the task of bringing that information together, of identifying and recording the similarities between find 1 from site A and find 2 from site B, and their relationship to find 3 from site C. Although his work on the iron artefacts from Martin Biddle's excavations in Winchester was a major contribution to the publication *Artefacts from Medieval Winchester: Object and Economy in Medieval Winchester* that appeared in 1990, the extraordinary range of artefacts from smaller sites was essential to the corpus of material that Ian assembled for his thesis. Although in many cases, alongside work on his thesis, he contributed a specialist report for the site publication, in other cases he incorporated in his thesis material from sites that remained unpublished, or published in not readily accessible form: the finds from Weoley Castle, Birmingham, perhaps, or the extraordinary 'hoard' of 13th-century sickles in Scarborough Museum from Ayton Castle, North Yorkshire.

By the time Ian submitted his thesis in September 1980 he had already built up an intensive knowledge of medieval iron finds from sites throughout Britain and an unparalleled expertise in their identification. In the Foreword to the thesis, Ian noted that 'Books, periodicals and unpublished objects have been examined to a terminal date of early 1980'. Some of the unpublished material was indeed to reach publication (in his Foreword Ian mentioned the Winchester material, publication then forthcoming), while he went on to study and publish other groups of iron finds himself, as his reputation spread and

excavators recognized his expertise.

But his many individual publications, constrained as they were by the limits of a single site report and the specific requirements of 'relevance', allowed little scope for a discursive approach; finds must be interpreted in the context of the site, not in the wider context of similar objects from elsewhere. Larger publications of finds from multiple sites, such as the two volumes of the Winchester finds report, allowed more space for discussion – the presence of a large number of a particular type of artefact would warrant an introductory discussion, even the proposal of a typological and chronological classification, not feasible in the case of reports on individual sites where there might be only one or two examples. And there was always the need for reference to comparanda; sometimes a most valuable aspect of one of Ian's smaller reports is an extensive list of comparable material (with reference often to others of his own publications). Ian also contributed a short but valuable chapter on 'The medieval blacksmith and his products' to the CBA Research Report *Medieval Industry* in 1981, including within its brief compass illustrations of an extraordinary range of medieval iron objects, from blacksmith's tongs to currycombs – his own drawings, originally produced for his thesis.

It was always Ian's hope – a hope shared by anyone who was privileged to see and make use of a copy of his thesis – that it would one day be published. Sadly, this was not to be in his lifetime. Yet here it is at last.

Ian's original Foreword set out the scope of his work, limiting 'the medieval period' to *c*1066 to 1540, and excluding weaponry and spurs from his coverage. The contents list defines the overall approach: objects are dealt with under clear functional headings such as 'woodworking tools'. Introductory paragraphs set the particular tool, household object or fitting in its historical context. Ian often defines, with drawings, the terminology he uses for parts of an object – useful for any report writer wishing to describe an unfamiliar artefact, and uncertain perhaps of the difference between the 'butt' and the 'poll' of an axe. For many objects he establishes a typological classification based upon form, to which he then applies a chronology drawn from stratified examples. This was of course the time-honoured approach that had been adopted by John Ward Perkins in the *London Museum Medieval Catalogue*, though Ward Perkins lacked the strong foundation of stratified examples that Ian was able to call on to support his conclusions about dating. And indeed in some cases – keys, for example, and shears – one can make a direct comparison between the typologies established by the two authors; Ian sometimes provides a useful list of correlations between the two. No doubt if he himself were preparing this volume for the press he would have refined his typologies on the basis of more recent finds, perhaps refined his dating – but others may now do that.

Terminologies and typologies make this volume a resource for any finds specialist needing to describe iron artefacts; there is, in spite of the existence of some thesauri, still a great lack of agreed standards. But it is the catalogue and illustrations that define this work as essentially a corpus: a brief catalogue entry for each item, including a date or date range derived from its archaeological context, and in nearly every case an outline drawing. An archaeological corpus of this type is an old idea, but time and time again such bodies of material prove their usefulness. The search for parallels for a particular object, whether it is a site find or in a museum collection, can be a tedious one, often dependent upon happenstance even if the researcher has access to a library containing all the county and local journals and monographs in which so many relevant finds reports have appeared – note the extent and range of the Bibliography of the present work. With this volume as a tool, the finds specialist will find comparative examples to hand – even that 'unidentified object' may suddenly yield its identity as a result of a search through the pages of Ian's drawings.

Much has changed in medieval archaeology since Ian submitted his thesis in September 1980. Major finds have been made and published; research into such relevant subjects as metallurgy has advanced. Yet there is nothing else that brings together such a wealth of everyday ironwork from such a range of medieval sites, from towns, villages, castles, manors and farmsteads.

It is a tool ready to be used.

John Clark
Curator Emeritus, Museum of London
April 2010

# Summary

This monograph is a survey of iron tools and other fittings in use during the medieval period, defined here as *c*1066 to 1540 AD. It is designed to help identify, date and understand medieval iron objects from archaeological excavation. The major categories of finds covered are tools from metalworking, woodworking, stoneworking, plastering, textile manufacture, tanning and leatherworking and agriculture. There are also sections on knives, shears and scissors, building ironwork, locks and keys, household ironwork, buckles and dress accessories and horse equipment. Weapons, armour, arrowheads and spurs are excluded. Both text and drawings derive from a doctoral thesis completed in 1980.

# Résumé

Le présent livre est une étude d'objets et ustensiles en fer en usage durant la période du haut Moyen Age (*c*1066 to 1540 apr JC). Il a pour objectif d'aider l'indentification, la dation et la compréhension des objets en fer trouvés lors de fouilles archéologiques. Les principales catégories d'objets couvert sont les outils utilisés pour travailler le métal, le bois, la pierre, le travail du plâtre, la production de textile, le tannage et le travail du cuir en général ainsi que des outils utilisés pour les travaux agricoles. Il y a aussi des parties dédiées aux couteaux, cisailles et ciseaux, des objets utilisés dans le domaine du bâtiment, des serrures ainsi que des clefs, des ustensiles de cuisine, des boucles et autre accessoires vestimentaires ainsi que du matériel équestre. Les armes ainsi que les armures, les pointes de flèche et les éperons sont en revanche exclus de cette étude. Le texte comme les dessins et autres croquis proviennent tout deux d'une thèse de doctorat terminée en 1980.

# Resumen

El presente libro es un estudio de los objetos y utensilios de hierro en uso durante la Edad Media (*c*1066 to 1540 dC). Tiene como fin el ayudar a identificar, fechar y comprender los objetos férreos procedentes de

excavaciones arqueológicas. Las principales categorías de objetos que se consideran son las herramientas para trabajar el metal, la madera, la piedra, para enyesar, tejer, teñir, trabajar el cuero y aquéllas utilizadas en las tareas agrícolas. Hay además apartados sobre cuchillos, tijeras, cerraduras y llaves, objetos empleados en la construcción de edificios, aquéllos utilizados en la casa, hebillas, adornos para el vestido y elementos para el aderezo de la caballería. Se han excluído armas, puntas de fechas y estribos. Tanto el texto como los dibujos derivan de una tesis doctoral concluída en 1980.

# Original Acknowledgements (1980)

The work on which the thesis was based was undertaken with the aid of a Major State Studentship between 1969 and 1972, and continued during the author's appointment to the Royal Commission on Historical Monuments (England). Unpublished objects have been examined to a terminal date of early 1980.

Many people gave assistance during the preparation of the original thesis, and I should particularly like to thank Dr G C Dunning and J G Hurst for allowing me to examine their collections of books and offprints. J W G Musty, L Biek and the staff of the Ancient Monuments Laboratory, as well as the staff of the Drawing Office of the Inspectorate of Ancient Monuments, have been of considerable help. Many excavators kindly gave access to their unpublished material, which has been incorporated here and is appropriately acknowledged in the catalogue. The finds from medieval Winchester undoubtedly include the most significant unpublished objects. Museum collections have in general only been examined for objects from stratified contexts, and I should particularly like to thank B W Spencer and J Clark (formerly Museum of London), J M Lewis (National Museum of Wales, Cardiff), D A Hinton (formerly Ashmolean Museum, Oxford) and Mrs R Taylor (Birmingham City Museum and Art Gallery) for their help.

The compilation of the original thesis on which this monograph is based was greatly assisted by the patient supervision and helpful advice of Dr W H Manning. Mrs E M Goodall typed the text and the reductions of the line drawings are by A D Perry. My wife, Alison, deserves my final and greatest thanks, however, for without her considerable assistance in reading the text and preparing the illustrations, the original thesis could never have been completed in time.

# Abbreviations

The following abbreviations have been used in the catalogues:

L: length
W: width
H: height
D: diameter
DAMHB: Department of Ancient Monuments and Historic Buildings
Sf: small find.

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# 1
# Iron Smelting and Smithing

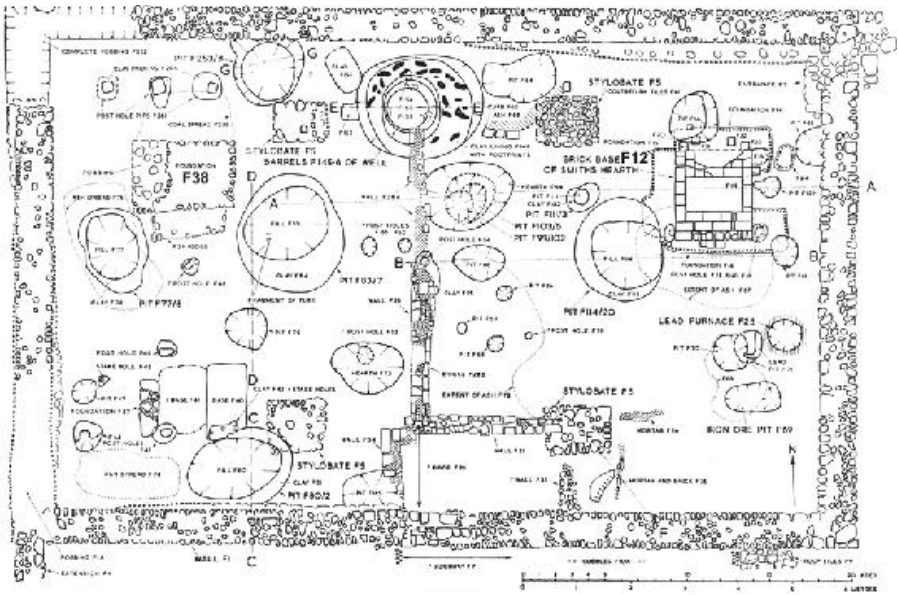



FIGURE 1.1
*Forge at Waltham Abbey, Essex (after Huggins and Huggins 1973, fig 2)*

Iron ore deposits are widespread in Britain, the main types being carbonate, haematite and limonite whose incidence is discussed by Tylecote (1962, 175–179). Quarrying with trenches as well as tunnelling is known from the Forest of Dean (Schubert 1957, 123, pls XIII-XIV) but widely occurring bell-pits are more frequent evidence of medieval deep mining of iron ore (Tylecote 1962, 284–285; Beresford and St Joseph 1979, 256, fig 107). Bell-pits near Sedgeley, West Midlands, had 1.5m diameter openings, a depth of 4.6m to 6.1m, and a maximum diameter of 3.6m.

## 1.1 Iron Smelting

Archaeological evidence for iron smelting is considerable and is discussed elsewhere (Tylecote 1962; 1976; Schubert 1957; Crossley 1981). A brief outline of the process is given here.

Iron ore was frequently roasted before smelting in a bloomery or blast furnace to make it more porous and more easily reduced. Medieval bloomery furnaces are of two basic types, the horizontally developed and the vertically developed bowl furnace, each with slag-tapping facilities. In use a charge of ore and charcoal was placed in the furnace and during smelting some of the lighter impurities were tapped off as slag until at the end cinders, slag and a bloom of iron were left at the bottom. The extracted bloom was consolidated on a string hearth by repeated hammering and with intermittent re-heating, the attached cinders being removed and the entrapped slag driven out to produce a bloom of wrought iron. This was then cut into pieces and if necessary rendered into bar iron for the blacksmith. Towards the close of the medieval period the blast furnace, which produced liquid iron in addition to slag, was developed. The first blast furnace definitely known to be in existence in Britain was at Newbridge, Sussex, in 1496 (Tylecote 1962, 301).

Iron smelting and smithing produce many waste products, not all unique to a single stage, and interpretations drawn from them, particularly where they are found without structural association, should be based on scientific examination. The products of smelting include the raw bloom with its entrapped slag and attached cinders, furnace bottoms, slag and tap slag, whilst smithing of the raw bloom produces slag hammered out of the bloom and hammer scale formed on its outer surface. The final forging also produces hammer scale and fine, almost microscopic, drops of slag.

## 1.2 Iron Smithing

Blacksmith's forges or smithies are known from a number of excavated sites, and include the 13th-century bloomery and adjacent smithy at Godmanchester in Cambridgeshire (Webster and Cherry 1975, 260, fig 96), where one room of a two-room building was used as a smithy and remains of four contemporary iron-smelting furnaces were found in a building to the rear. Medieval documents indicate that string hearths were sometimes attached to bloomeries (Salzman 1967, 31; Tylecote 1962, 287–289) and were sometimes separate (Schubert 1957, 126–127), and it is at present unclear whether this smithy housed a string hearth or was a conventional smithy.

At Waltham Abbey, Essex, a forge built about 1200 on the home farm of the Augustinian Abbey survived the Dissolution and stood, not necessarily in use, into the 17th century (Huggins and Huggins 1973). Iron ore and bloomery products indicate that the site, if not the building, was used for iron smelting.

The forge (Figure 1.1), built as a three-bay aisled building 15.7m by 10.1m, was certainly used for making complete objects since bar iron, incomplete forgings and a series of tools (catalogued below) were found, as well as two smith's hearths surrounded by concentrations of hammer scale. One hearth (F12) consists of a rectangular brick base, 1.67m by 1.42m surviving five courses high and set on a wider foundation; the other hearth (F38) survives only as a flint and chalk foundation, 1.9m by 1.4m. Both have separate foundations which could have supported a water bosh. The more complete hearth is very similar to that in a smithy of *c*1395–1405 at Alsted, Surrey (k etteringham 1976, 25–29, figs 19–21), where the 6.0m by 5.5m building (Figure 1.2A) had a rectangular stone hearth with fire-pit, working surface and space for bellows, as well as a large sandstone block immediately in front to support the anvil block. Hammer scale was found on the floor surrounding the stone and along the front of the hearth, and the site produced a number of tools which may be related either to the smithy or to earlier iron smelting.

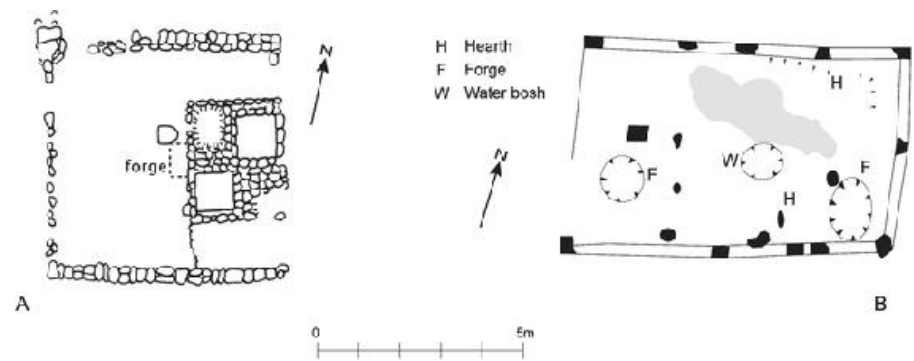



FIGURE 1.2
*A: Smithy at Alsted, Surrey (after Ketteringham 1976, fig 19). B: Smithy at Goltho, Lincolnshire (after Beresford 1975, fig 22)*

The late 14th to early 15th-century smithy at Goltho, Linconshire (Beresford 1975, 46, figs 21–22), a timber building 8.0m by 5.0m (Figure 1.2B) surrounded by a yard surfaced with smithing slag, had two pits which produced smithing furnace bottoms (Tylecote 1975). The later pit, to the SE, was used until the time of desertion. A clay-lined pit in the floor may have been a water bosh or cooling water-basin, but no blacksmith's hearth similar to those at Waltham Abbey or Alsted was found. A small quantity of bar iron, and a few tools and other objects do, however, indicate the forging of objects.

Blacksmiths frequently also acted as farriers, and the late 14th to mid 15th-century smithy at Huish, Wiltshire, was evidently used by a farrier (Thompson 1972, 115, fig 1). The building, which was destroyed by fire, was 3.0m by 2.4m and had two hearths, in one of which were two horseshoes, a claw hammer, a

poker and other indeterminate objects. The forge at Waltham Abbey produced evidence connected with farriery in the form of four horseshoes, two oxshoes and 160 horseshoe nails (Huggins and Huggins 1973).

The smithies already noted are mainly on monastic, manorial or village sites, but excavation in Southampton, Hampshire, located part of the floor of a late 12th or early 13th-century urban smithy floor (Platt and Coleman-Smith 1975, I, 238, 267, 349, pl 74).

The smithy must have been an important building during the construction and occupation of castles, and several have produced relevant finds. Iron slag, bar iron, tongs, a sledgehammer, chisel and axe from Deganwy Castle, Gwynedd, are probably from a smithy. They were found together at a depth of 61mm in an isolated hole in the bailey of Henry III's castle, begun 1245 and destroyed 1263, but could be of earlier date since the site had been in intermittent occupation for many centuries (Alcock 1967). Ironworking, probably initially including the smelting of ore, was the main activity in a workshop on the motte at l ismahon, Co. Down (Waterman 1959a, 152, 155–156) during the 13th and 14th centuries, and hammer scale and forging hearth slag were found with scrap iron and bronze on the site of a 14th-century workshop at Bramber Castle, West Sussex (Barton and Holden 1977, 38, 66–67). West of the gatehouse-keep sundry nails, horseshoes, etc, were found in a probable 14th-century context with very little slag and may imply a second smithing area (Barton and Holden 1977, 67; ex inf E W Holden).

Less certain evidence comes from Lyveden, Northamptonshire, where a roughly rectangular paved area 6.5m by 4.2m with areas of burnt clay and stone, charcoal, iron slag and coal has been interpreted as a probable smithy in use *c*1200–1350 (Steane and Bryant 1975, 4–9, 21–22, figs 7–8).

At Walsall, West Midlands, a 4.0m by 11.0m building of 13th or 14th century date may have served as a forge and later as a fuel store (Wrathmell and Wrathmell 1974-75, 27–29, 51, figs 2–4, pl II).

## 1.3 Bar Iron and Incomplete Forgings

The blacksmith's raw material, other than scrap iron collected for reuse, comprised pieces of iron cut from blooms and lengths of bar iron of varying size and cross section. Purchases of iron for use in medieval building-work are often mentioned in accounts (Salzman 1967, 286–288), and the iron was both native and foreign, the former including specifically named Weardale, Gloucester and Wealden iron, and the latter particularly Spanish iron. The iron

is often priced and bought by the stone or hundredweight, or in sizes called gad, seam and hes. It was sometimes just held in store, but was also bought for particular use, such as Spanish iron for window bars bought at Corfe in 1292, or for hooks and bands at Dover in 1363. Steel, often from Sweden, was also bought for tool and knife edges (Salzman 1967, 288).

A shaped, rectangular sectioned bar from Winchester (**A1**) proved on examination to be a dense, well-worked piece of wrought iron with few slag inclusions. A bar fragment (**A2**) from Deganwy Castle found with other blacksmith's equipment and iron slag, has a chisel-cut end, indicating that it is part of a once larger piece. The shape of the chisel-cut shows the characteristic way the blacksmith cut metal, since it was important not to cut entirely through the iron and dull the edge of the chisel on the hard face of the anvil. In practice the smith reduced the force of the hammer blows on the chisel just before the cut was complete, and then often broke it by hand.

Two pieces of iron (**A3–A4**) are known from a site with ironworking evidence at Newbury, Berkshire, but over 100 pieces of sheet iron, bar iron of square, rectangular and round section, and lengths of iron wire come from the forge at Waltham Abbey. **A5–A10** are a representative selection, whilst **A11–A15** are shaped pieces, some perhaps scrap iron or partly forged objects. Definitely identified incompletely forged objects from the site, catalogued below, include those of six auger bits and a key, but it is impossible to be certain whether other objects such as a padlock bolt head and lock wards belong to incomplete objects, are scrap, or were in actual use. Other incomplete forgings include keys from Gloucester and Goltho, the latter from the croft with the late 14th to early 15th century smithy which produced a little bar iron (**A16**). Chingley and Tattershall College produced knife moods, and **A17**, a shaped, partly forged piece of iron comes from Lyveden.

**A1 BAR**

Winchester, Hampshire.

Late 11th to early 12th century.

Rectangular section bar shown by metallurgical examination to be dense, well-worked wrought iron with few slag inclusions. Weight 1.28kg (2.81 lb). L 280mm.

Biddle 1990, fig 38, no. 37.

**A2 BAR**

Deganwy Castle, Gwynedd.

Unstratified in bailey of castle of 1245–63, on site with earlier occupation. Found with blacksmith's equipment and iron slag.

r ectangular section bar, chisel-cut across one end. L 108mm.

Excavated by W Greenhalgh. For site see Alcock 1967.

**A3 BAR IRON?**
Newbury, Berkshire.
12th to 13th century.
r ectangular section bar. L 31mm Ford 1979, 25, fig 3.2.

**A4 BAR IRON**
Newbury, Berkshire.
Unstratified.?13th century.
Rectangular section piece of iron. Weight 1.1kg (2 lb 9 oz). L 113mm.
Ford 1979, 25, fig 3.3.

**A5 BAR IRON**
Waltham Abbey, Essex.
16th/17th century destruction debris plus derived pottery from forge built *c*1200.
Rectangular section bar, one end probably chisel cut. L 104mm.
Goodall 1973a, 170, fig 11.1.

**A6 BAR IRON**
Waltham Abbey, Essex.
13th and 16th century.
Rectangular section bar. L 133mm.
Goodall 1973a, 170, fig 11.2.

**A7 BAR IRON**
Waltham Abbey, Essex.
12th/13th century.
r ectangular section bar. L 70mm.
Goodall 1973a, 170, fig 11.3.

**A8 BAR IRON**
Waltham Abbey, Essex.
15th/16th century.
Square section bar fragment. L 161mm.
Goodall 1973a, 170, fig 11.4.

**A9 ROD**
Waltham Abbey, Essex.
16th century.
Rod fragment, circular section. L 127mm.

Goodall 1973a, 170, fig 11.5.

**A10 WIRE**
Waltham Abbey, Essex.
15th/16th century.
Wire fragment, 3mm diameter. L 123mm.
Goodall 1973a, 170, fig 11.6.

**A11 BAR IRON**
Waltham Abbey, Essex.
16th century.
Octagonal section bar fragment. L 94mm.
Goodall 1973a, 170, fig 11.7.

**A12 BAR IRON**
Waltham Abbey, Essex.
16th/17th century destruction debris plus derived pottery from forge built *c*1200.
Tapered bar fragment, rectangular section.
L 71mm.
Goodall 1973a, 170, fig 11.8.

**A13 BAR IRON**
Waltham Abbey, Essex.
Possibly 13th century.
Tapered bar fragment, rectangular section.
L 62mm.
Goodall 1973a, 170, fig 11.9.

**A14 BAR IRON**
Waltham Abbey, Essex.
16th/17th century destruction debris plus derived pottery from forge built *c*1200.
Curved, rectangular section bar thickened at one end. L 210mm.
Goodall 1973a, 170, fig 11.10.

**A 15 BAR IRON**
Waltham Abbey, Essex.
12th/13th century.
Bar fragment, chamfered sides. L 58mm. Goodall 1973a, 26, fig 11.11.

**A16 BAR IRON** (not illustrated)

Goltho, linconshire.
Late 14th to early 15th century.
A few pieces of generally rectangular section iron, found near smithy and representing metal used in it.
Goodall 1975a, 87.

**A17 INCOMPLETE FORGING**
Lyveden, Northamptonshire.
Second quarter 13th century.
Shaped piece of rectangular section bar.
L 78mm.
Bryant and Steane 1971, 55, fig 13f.

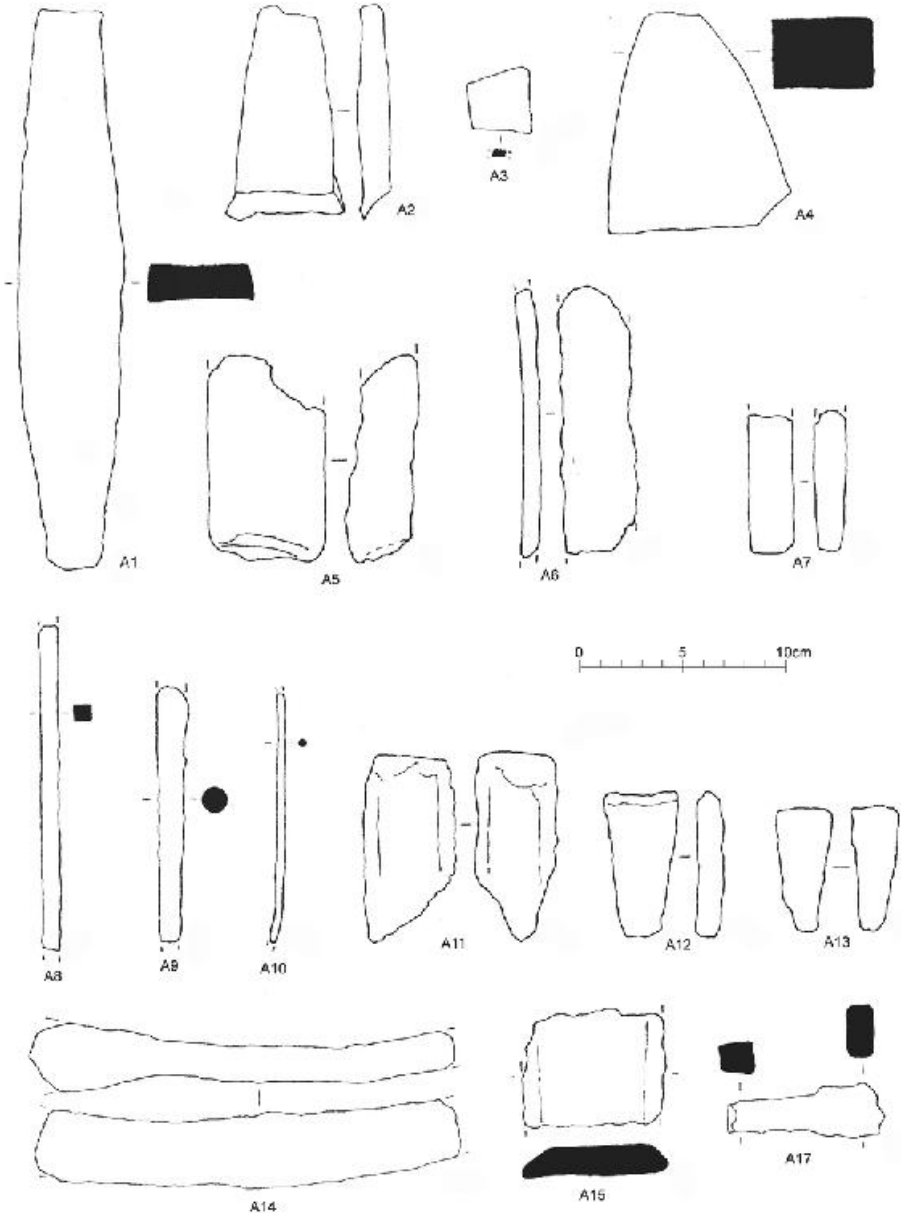



FIGURE 1.3
*Iron smelting and smithing: Bar iron and partly forged objects*

# 2
# Metalworking Tools

The blacksmith probably required the widest range of tools of the medieval craftsmen in metal, and this is reflected in the surviving tools which include tongs, pincers, hammers, chisels and punches. The following account draws much of its practical information about smithcraft and tools from COSIRA 1955 and Smith 1966.

## 2.1 Anvils

Representations of blacksmiths are not infrequent in medieval illuminated manuscripts, where they sometimes appear symbolically as St Eloi and sometimes as craftsmen at work in a forge. No anvils have yet been found, but illuminations indicate that they were set into the flat tops of wooden blocks which served both to raise them to the required height and to absorb some of the shock of the impact of hammer on anvil. Accounts for Dover Castle (Salzman 1967, 347) record that an anvil was bought in 1265 as well as 'a wooden block on which to put an anvil in the smithy'. The anvil was placed close to the smith's hearth for practical purposes, and a stone base surrounded by hammer scale in front of the hearth in the forge at Alsted, Surrey, (Ketteringham 1976, 25, 28, figs 20–21) probably supported such a block.

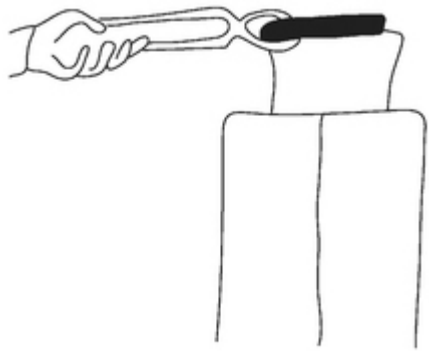
Anvils were of several types, but they are frequently depicted as simple blocks of iron, as in the 11th-century Caedmon manuscript (Figure 2.1A) or the Holkham Bible of *c*1325–30 (Figure 2.1B; and see cover illustration). Other illustrations (Figures 2.1C–D) clearly show beaked anvils with one or two conical end projections for shaping forgings, and an inventory of smith's tools at Rochester in 1363 (Salzman 1967, 347) includes both an 'anuell' and a 'bicorne', the latter evidently an anvil with two horns or cones.

## 2.2 Tongs

Tongs were used by craftsmen in non-ferrous metals for moving and pouring

crucibles, and the down-turned jaws of **A18** are ideally shaped for gripping the rim of a small crucible.

Tongs are one of the blacksmith's basic tools, used to hold the work at all stages of forging, and the range in size and shape reflects the differing uses. Any one smith might have several pairs of tongs, and an inventory of smith's tools at Rochester in 1363 (Salzman 1967, 347) includes '8 tonges' and a 'spentonge' or gripping tongs.



A

B

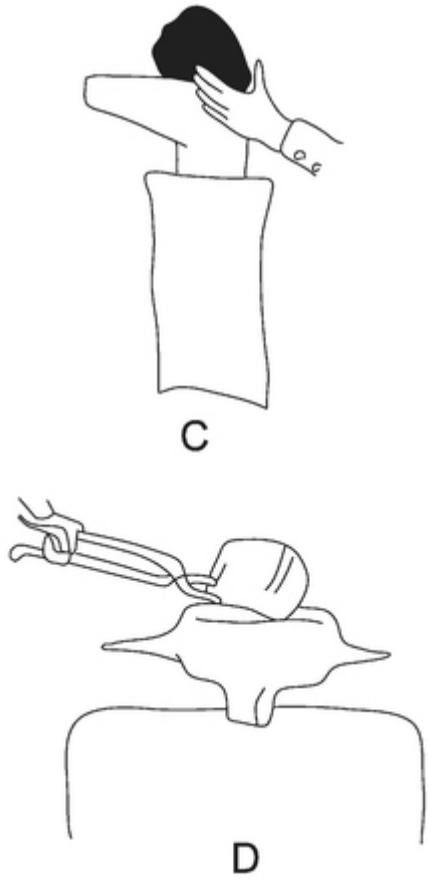



FIGURE 2.1
*Anvils: representation in medieval manuscripts. A: English, 11th century. B: English, c1325—30. C: Franco-Flemish, c1340. D: English, c1250 (At Wilson 1976, 264, pl XIII. B: See cover; C-D: Harvey 1975a, pls 120-121)*

Medieval tongs **A19–25** have hinged jaws with gripping faces held by rivets, which, when complete, often have domed heads. The straight handles, called reins by modern smiths, are almost parallel when the tongs are in use, enabling the smith to grip and manoeuvre them conveniently. Most handles are now incomplete, but the one complete handle of **A23**, and both of **A24**, have knobbed terminals whose purpose was to prevent a loop slipped over the ends from sliding off. The loop saved the blacksmith effort when undertaking a sustained or repetitive job, since it held the handles in tension and allowed the tongs to be put down without the forging dropping from the jaws. The flattened ends of **A19** may have acted similarly, the loop being slipped over them whilst they were held together, and being prevented from sliding off by their springing apart when released.

The jaws vary in form, those of the larger pairs of tongs **A19–21** being broad

and straight or gently curved with flat gripping faces suitable for holding heavy pieces of iron. The long handles, only complete on **A19**, will have enabled them to be used in forging at great heat. Smaller tongs were used when a firmer grip was required and when the iron did not require strong heat for forging, as well as for delicate, small work. The jaws of **A22–24** are either straight or gently curved, and all have flat faces; those of **A22–23** taper towards the tip and are not unlike armourers' hammers. The small pair of tongs **A25** are most appropriate for small-scale work.

## 2.3 Pincers

The blacksmith frequently acted as a farrier shoeing horses, as finds from the smithies at Huish, Wiltshire, and Waltham Abbey, Essex, demonstrate. At Huish (Thompson 1972, 115) one of the hearths contained two horseshoes, a claw hammer and a poker, whilst at Waltham Abbey four horseshoes, two oxshoes and 160 horseshoe nails were recovered (Huggins and Huggins 1973).

Tongs were used during the forging of horseshoes and nails, but the shoe was removed from the hoof with pincers with curved jaws and a broad, sharp gripping edge capable of gripping a nail and levering it out. Pincers **A26** have such jaws as well as shaped handles identical to a pair held by St Eloi, patron saint of blacksmiths, as depicted in the 14th-century Luttrell Psalter (Millar 1932, 27–28, f 52, reproduced in Webber 1971, 25). The hooked end may have held a loop which closed over the knobbed end of the opposing handle. **A27**, which are slightly larger, have straight handles. Carpenters as well as blacksmiths used pincers, and these examples could have been used by either craftsman.

## 2.4 Hammers

An inventory of blacksmith's tools at Rochester in 1363 (Salzman 1967, 347) includes four sledgehammers, two large hammers and four small hammers. The sledgehammer was used during the dividing and working of blooms of iron into bars, in heavier forging such as drawing down and cutting bar iron, and for striking top anvil tools such as set hammers. The other hammers were used during later stages of forging.

FIGURE 2.2
*Blacksmiths in a forge, Franco-Flemish 14th-century manuscript (Harvey 1975a, pl 119)*

Sledgehammers can be divided by use into the heavier swing sledge (today 3.63–9.07kg, 8–20 lb) set on a long handle and swung with two hands, and the lighter hand sledge (2.72–3.63kg, 6–8 lb) set on a shorter handle and swung from shoulder height. During the initial forging, as a 14th-century illuminated manuscript depicts exactly (Figure 2.2), the swing sledge was wielded by the striker, who was the smith's apprentice or labourer, while the smith held a hand sledge and gripped the hot iron on the anvil with tongs.

Medieval sledgehammers are of two types: **A28** a double-faced sledge, **A29–31** cross-pane sledges. **A28**, found with other items of blacksmith's equipment and iron slag, has an octagonal-sectioned head and gently rounded faces designed to spread the force of the blow without cutting the iron. The cross-pane sledges **A29–31**, with their panes set at right angles to the handles, were used to draw down the iron. **A29–30** have heads with flat undersides and cheeks which rise either side of the eye, probably to ensure more secure hafting, whilst **A31** has instead an expansion around the eye and a more centrally set cross-pane arm. Wooden handles must often have been secured in the eye by wedges or nails, either from the start or after they worked loose, and a nail survives in **A31**.

Hand hammers used for general work at the anvil are of two types: with a face and either a cross-pane or straight pane. The cross-pane is set at right angles to the handle, the straight pane in the same plane. The face of either might be used for striking tools such as punches and chisels, but the pane was used to concentrate blows on a small area during forging and spread the iron

crosswise or lengthways. **A32–34** are all cross-pane hammers with flat undersides, **A32–33** having cheeks which rise either side of the eye, **A34** an expansion around the eye. The fiddle-key horseshoe nail used to secure the haft in the eye of **A32** perhaps implies that it was used by a farrier. **A35** is the down-turned pane from a cross-pane hammer. No straight-pane hammer is yet known, but the type is present on both pre- and post-medieval sites, and will have been used by the medieval blacksmiths.

The blacksmith is unlikely to have had sole use of these hammers since the sledgehammer was also used by the stonemason and the hand hammer by the carpenter, the cross-pane starting nails, the head driving them in. Claw hammers, although used by farriers shoeing horses, are discussed below under woodworking tools (Chapter 3).

Bronzesmiths and craftsmen in other fine metals must at times have used hammers similar to the lighter blacksmiths' hammers, but some of the more delicate work might have required a hammer such as **A36** with its two differing arms.

## 2.5 Flatters and Set Hammers

Flatters and set hammers, smoothing tools whose function is to smooth out flaws and crude forgings, are placed on the iron and struck with a sledge or a heavy hand hammer. Modern set hammers are generally uniform in size from top to bottom, whilst the bottom of flatters spreads outwards. They may have flat or convex faces with sharp or rounded edges, according to the purpose for which they are required. The set hammer **A37** is burred by striking and has an oval convex face and rectangular eye for hafting.

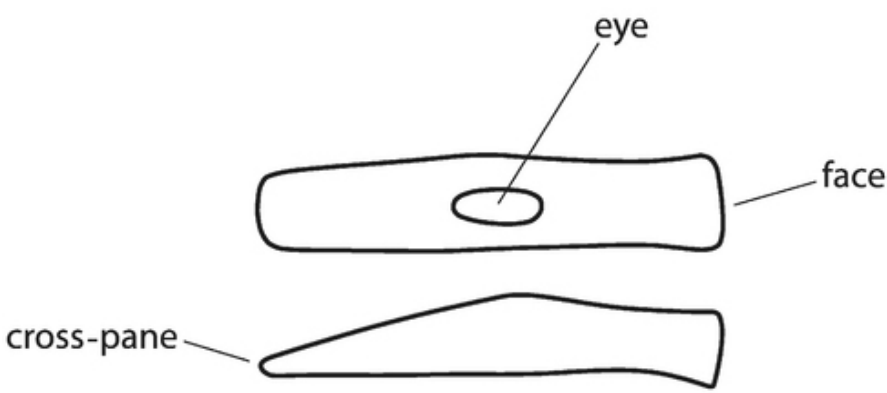



FIGURE 2.3

## 2.6 Chisels and Sets

Chisels and sets are principally blacksmiths' tools for cutting iron, the chisel struck with a hand hammer and generally hand held, the set struck with a sledgehammer and either hafted or rodded. Cold and hot chisels and sets cut cold and hot iron respectively, although certain differentiation between them is not always possible and is unlikely to have applied in practice. Modern chisels for cutting cold iron are made from steel containing about 0.875 per cent carbon, those for cutting hot iron of steel containing 0.75 per cent carbon, the difference being accounted for by the softness of hot iron which can be cut by a correspondingly softer metal. An awareness of the property of steel is demonstrated by chisels **A50–51**, both of which have been shown to have steeled tips and wrought iron bodies. **A43** is completely wrought iron, although it may have been intended to weld on a steel edge.

The blacksmith did not have sole call on these tools, and some of the smaller chisels may have been used by craftsmen in other metals, particularly by bronze-founders for trimming risers and flashes off castings. Cold chisels are also used by masons, but on the whole their chisels tend to be longer and stouter than the smiths' and have flaring blades.

### Cold chisels

The cold chisel is today short and thick, often just long enough to be held in a clenched hand and having a relatively sharp edge to enable it to cut cold metal. **A38-42** are all incomplete, **A38** and **A40** having burred heads but lacking cutting edges, and the remainder vice versa.

### Hot chisels

Hot chisels, unless held with a wire loop, must be long enough to keep the hand away from the heat of the job and slender enough to be driven into the soft, hot metal. The blade may be sharp or slightly rounded in section.

**A43–51** vary considerably in size, a variation which reflects both the range of bar iron to be cut and objects to be forged. Most of the hot chisels are

complete and retain expanded and sometimes burred heads, and metallurgical examination has shown **A50–51** to have steeled blade edges and wrought iron stems. **A43**, which is of wrought iron without a steel edge, may be a hot chisel at an intermediate stage of forging. Precision was needed when forging items such as locks and purse frames, and some of the smaller chisels may have been used in their manufacture.

### Cold sets

Cold sets resemble cold chisels but are stouter. **A52–54**, all from the forge at Waltham Abbey, Essex, are variously incomplete, **A53** having a burred head and, like the others, no indication of an eye for a haft. All may have been rodded, namely held by an iron rod wrapped round the body a couple of times with enough left over to form a handle. Cold sets are today sometimes hafted, but the defect of the haft lies in its rigidity which, although giving better control, can severely jar the holder's arm or break when the tool is struck by a sledgehammer.

### Hot sets

Hot sets, the equivalent of a hot chisel but with a face for striking and an axe-like blade, are capable of more precise work than cold sets and are now usually hafted. The hot set from the smithy floor at Goltho, Lincolnshire, **A55**, has a burred face and the asymmetrical blade shape suggests that it may be a reused axe blade fragment.

## 2.7 Punches and Drifts

Punches are used to make holes in hot iron and drifts to enlarge, open out or smooth the hole. Certain identification of punches and drifts is impossible, since a headless stout punch may resemble a slender drift. Punches are also used in woodworking to sink nail heads, and these cannot easily be distinguished from blacksmiths' punches and drifts.

### Punches

Punches used by the blacksmith to make holes in hot iron can be round, rectangular or any other required shape, and unless rodded or hafted must be long enough to keep the hand away from the forging.

The majority of surviving punches, where sufficiently complete, have heads burred by hammering and stems tapering either to a flattened tip or to a point. **A56–69** are all of rectangular section with flattened tips while **A60-65** taper to points and are of rectangular or square section. **A61–62** are unusual in having a circular section to the upper, hand-held part of their stems. **A66–67** also taper to points but are of octagonal and circular section respectively. **A68** is also octagonal but lacks any taper to its rounded, flat tip, whilst **A69** resembles it but is incomplete.

Punches **A56–69** could have been hand-held, but **A70–73** must have been held by iron rods looped round their thickened stems. All have burred heads and none of their stems has any indication of an eye for a haft.

Particular jobs often required their own tool, and punches **A74–75** may both have punched nail-holes in horseshoes. Horseshoes contemporary with them all had countersunk nail-holes, that is nail-holes set within a rectangular recess, and they may have punched the actual hole through the countersinking, itself produced by a tool such as **A57**. **A74–75** may also, however, have been used to make holes in strap hinges and similar objects.

### Drifts

Drifts are normally shorter and stouter than the punches used to make the holes that they are smoothing or enlarging, and they characteristically have a short taper to the head and a longer one to the tip, a shaping which allowed them to be driven right through the hole. **A76–85** are of square, rectangular and circular section at the tip, and vary considerably in size. The larger drifts **A76–77** may have been used on such objects as hammer heads and picks.

## 2.8 Fullers

Fullers are used by the blacksmith for making shoulders before drawing down, and for drawing iron in a particular direction. Small hand-held fullers resemble chisels and sets but have rounded noses; larger fullers are rodded. **A86** may be a fuller, which would today be used in conjunction with a bottom fuller set in the anvil.

## 2.9 Mandrels

Two Shene inventories, for 1444 and 1473, mention mandrels (Salzman 1967, 348). The earlier records '5 mandrels, 6 iron bolsters specially made for 6 mandrels, … 4 mandrels for hinges', and the later 'a round iron mandrel, 4 square iron mandrels for making hinges'.

Modern floor mandrels take the form of cones which can stand up to 1.37m (4½ ft) high and are used for forming hub bands, rings, hoops, etc. Hand mandrels are essentially small bars of iron, sometimes tapering and of round or rectangular section, which in use either rested on the face or edge of the anvil and were used for forging small rings and collars and for bending iron. The size and shape of the hand mandrel is determined by that of the object being forged, and the circular section mandrels may substitute for or complement the beak of an anvil. **A87–90** are possible hand mandrels, two with whittle tangs for insertion in a handle, two with riveted tangs. **A87–88** have tapering, circular-sectioned arms, suitable, amongst other objects, for forging small circular hose and shoe buckles. **A89–90** have straight, rectangular-sectioned arms. It must be emphasized that the identification of **A87–90** as mandrels is not certain.

## 2.10 Nail-Heading Tool

The bolsters mentioned in connection with the mandrels in the Shene inventory were iron plates with holes in them which were placed under the iron being punched. **A91** is probably too slight to be a bolster, but it may be a nail-heading tool equivalent to the '3 nailtol' of the 1363 Rochester inventory or '2 iron naile tooles' of the 1473 Shene inventory (Salzman 1967, 347–348). In use the tapered shank of the nail was dropped into the appropriate hole in the tool, with the smaller opening uppermost, and the head formed by hammering.

## 2.11 Files

Metalworkers, farriers and carpenters all used files, but the difference between them lies in the form of the teeth, the woodworkers' file having coarser teeth than the metalworkers' to prevent it becoming clogged with dust. The file was

an important finishing tool for the metalworker, who used it to remove rough edges, smooth out casting marks and give the final shaping to an object. It was especially useful for the delicate work of such craftsmen as the locksmith, but it must have been universally used, farriers employing it for example to sharpen their knives and smooth newly forged horseshoes. Such a variety of tasks will have required files of varying size and cross section, as modern examples testify, but few medieval examples survive. **A92** is flat with diagonally cut teeth.

## 2.12 Fire Tools

The medieval smithies at Waltham Abbey and Goltho both produced coal used to fuel the blacksmith's hearth, but neither produced the poker, rake or shovel used to manage it.

Pokers are used to loosen the fire and stir the fuel, letting out gases and allowing the bellows to operate more efficiently. Modern pokers take the form of a long iron rod, tapering to the tip from a simple loop handle but **A93**, from one of the two hearths in the smithy at Huish, has a socket evidently for a wooden handle.

Modern rakes with L-shaped ends and loop handles may double as pokers, but more characteristically they have a split end and down-turned arms. They are used to loosen the fuel, gather it together and separate out clinker. No medieval example is known.

Some of the medieval spades and shovels with iron-shod blades (**F6–17**) may have been used by blacksmiths to replenish fuel or remove ashes, since they resemble one shown in a 14th-century illumination (Figure 2.2) resting against the opening of a coal store serving a blacksmith's hearth. Shovels with entirely iron blades will have been more appropriate for some uses, but they are infrequent medieval finds. **F18** was probably used to fuel a glass kiln.

**A18 TONGS**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Incomplete arm from small pair of tongs with down-turned jaws. L 64mm.
Goodall 2002, 100, fig 7.3, no. 28.

**A19 TONGS**
Criccieth Castle, Gwynedd.
Site *c*1230 –1404.

Tongs with flat, straight jaws and long handles with flattened ends. L 269mm.
O'Neil 1944–45, 42. National Museum of Wales, Cardiff 41.246.1.

**A20 TONGS**
Deganwy Castle, Gwynedd.
Unstratified in bailey of castle of 1245–63, on site with earlier occupation. Found with blacksmith's equipment and iron slag.
Gently curved jaws, handles broken. L 251mm.
Excavated by W Greenhalgh. For site see Alcock 1967.

**A21 TONGS**
Gloucester, Gloucestershire.
Late 12th/13th century.
Narrow, straight jaws, handles broken.
L 212mm.
Excavated by H Hurst.

**A22 TONGS**
Weoley Castle, West Midlands.
Around 1270–1600.
Tapering, straight jaws, broken handles.
L 240mm.
Taylor 1974. For site see Oswald 1962.
Birmingham City Museum, WC366.

**A23 TONGS**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Gently curved jaws, knobbed end to one handle, other broken. L 198mm.
Salisbury and South Wiltshire Museum, O.S.D2.

**A24 TONGS**
Netherton, Hampshire.
Mid 14th century.
Gently curved jaws, handles with knobbed ends. L 146mm.
Goodall 1990-27.

**A25 TONGS**
Winchester, Hampshire.
12th,?13th century.
Both arms broken. L 78mm.

Goodall 1990-3, fig 41, no. 40.

**A26 PINCERS**

Denny Abbey, Cambridgeshire.

On floor of period 1169–1308,? in use to 1539.

Pincers with broad jaws. Longer handle, has knobbed terminal, other hooked and broken.

L 254mm.

Goodall *et al* 1980, no. 9.

**A27 PINCERS**

Norwich, Norfolk.

In 1507 fire deposit.

Pincers with broad, curved jaws and plain straight handles.

L 290mm.

Carter *et al* 1974–47, 47, pl 1.4.

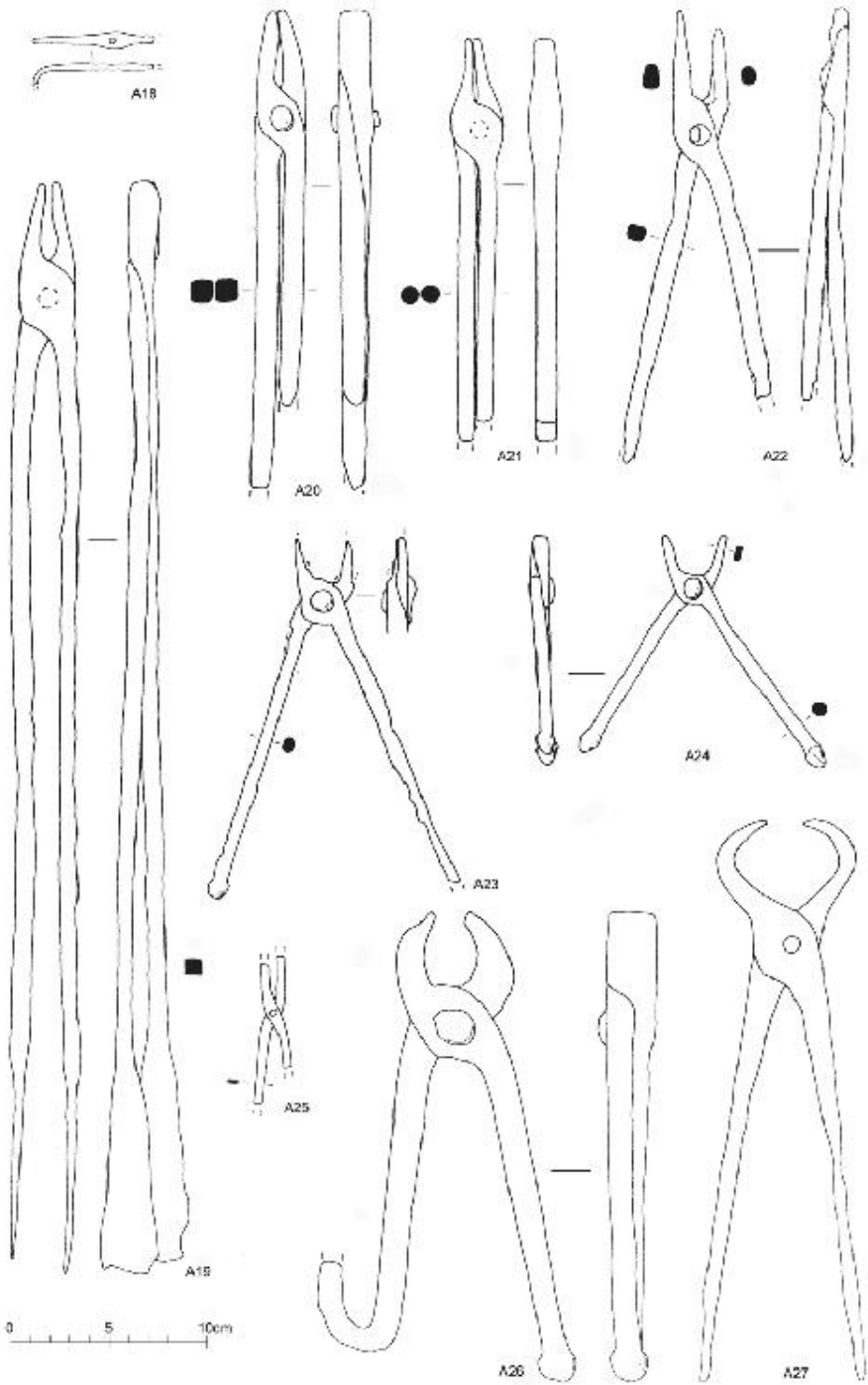



FIGURE 2.4
*Metalworking tools: Tongs and pincers*

## A28 SLEDGEHAMMER

Deganwy Castle, Gwynedd.
Unstratified in bailey of castle of 1245–63, on site with earlier occupation. Found with blacksmith's equipment and iron slag.
Double-faced hammer of octagonal section, expanded around the rectangular eye.
L 157mm.
Excavated by W Greenhalgh. For site see Alcock 1967.

**A29 SLEDGEHAMMER**
Thetford, Norfolk.
11th century.
Cross-pane hammer of rectangular section with flat underside.
Cheek rises beside eye. L 121mm.
Goodall 1984.

**A30 SLEDGEHAMMER**
Castell-y-Bere, Gwynedd.
Site *c*1221–95.
Cross-pane hammer of rectangular section with flat underside. Cheek rises beside eye.
L 221mm.
Butler 1974, 97, fig 9.15.

**A31 SLEDGEHAMMER**
Weoley Castle, West Midlands.
Around 1270–*c*1380.
Cross-pane hammer with rounded face and expansion round eye which retains part of wooden handle and securing nail. L 175mm.
Taylor 1974. For site see Oswald 1962.
Birmingham City Museum, WC361A.

**A32 HAMMER**
Old Sarum, Wiltshire.
Second half of the 11th century.
Cross-pane hammer of rounded section towards face, rectangular to pane.
Fiddle-key horseshoe nail in eye. Cheek rises beside eye, flat underside. L 85mm.
Stone and Charlton 1935, 184, fig 3.1.

**A33 HAMMER**
Wintringham, Cambridgeshire.
Early 14th century.

Cross-pane hammer of octagonal section towards face, rectangular to pane.
Cheek rises beside eye, flat underside.
L 104mm.
Goodall 1977a, 257, fig 46.62.

**A34 HAMMER**
West Hartburn, Durham.
Site 13th to 16th century.
Cross-pane hammer, pane broken.
Expansion around square eye. L 105mm.
For site see Still and Pallister 1964; 1967.

**A35 HAMMER**
Winchester, Hampshire.
13th century.
Down-turned pane from cross-pane hammer. L 30mm.
Goodall 1990-8, fig 60, no. 401.

**A36 HAMMER**
Ellington, Cambridgeshire.
Second half 12th to second half 13th century.
Slender hammer of rectangular section with slight expansion around eye.
One long pointed arm, other short and blunt.
L 48mm.
Goodall 1971, 68, fig 12.19

**A37 SET HAMMER**
Ospringe, Kent.
Around 1483–1550.
Burred head, rectangular eye for haft, oval convex face. L 111mm.
Goodall 1979c, 129, fig 130.1

**A38 COLD CHISEL**
Waltham Abbey, Essex.
Lowest silt in well dug *c*1300, filled in late 15th or early 16th century.
Burred head, broken rectangular-sectioned stem. L 204mm.
Goodall 1973, 170, fig 11.16.

**A39 COLD CHISEL**
Waltham Abbey, Essex.
16th century.

Broken rectangular-sectioned stem. L 201mm.
Goodall 1973a, 170, fig 11.17.

**A40 COLD CHISEL**
Deganwy Castle, Gwynedd.
Unstratified in bailey of castle of 1245–63, on site with earlier occupation.
Found with blacksmith's equipment and iron slag.
Burred head, broken rounded rectangular stem. L 55mm.
Excavated by W Greenhalgh. For site see Alcock 1967.

**A41 COLD CHISEL**
Theodoric's Hermitage, West Glamorgan.
Site 13th–15th century.
Broken stem with blade. L 86mm.
National Museum of Wales, Cardiff, 49.140.23.

**A42 COLD CHISEL**
Theodoric's Hermitage, West Glamorgan.
Site 13th–15th century.
Broken stem with blade. L 103mm.
National Museum of Wales, Cardiff, 49.140.23.

**A43 HOT CHISEL**
Winchester, Hampshire.
Mid to late?13th century.
Enlarged head, waisted rectangular-sectioned stem. Broadening to blade.
Blade found to consist of ferrite and slag.
L 176mm.
Goodall 1990-3, fig 41, no. 41.

**A44 HOT CHISEL**
Stonar, Kent.
Around 1275–1330.
Expanded head, rectangular-sectioned stem.
L 166mm.
Excavated by N Macpherson-Grant.

**A45 HOT CHISEL**
Thetford, Norfolk.
?11th century.
Expanded head, rectangular-sectioned stem.
L 104mm.

Goodall 1984.

**A46 HOT CHISEL**
Northampton.
Later 15th century.
Burred head, rectangular-sectioned stem.
L 82mm.
Goodall *et al* 1979, 273, fig 119.63.

**A47 HOT CHISEL**
Goltho, Lincolnshire.
Unstratified on croft occupied from late Saxon period to late 14th or early 15th century.
Burred head, octagonal-sectioned stem.
L 80mm.
Goodall 1975a, 87, fig 41.89.

**A48 HOT CHISEL**
South Cadbury, Somerset.
11th–12th century.
Burred head, rectangular-sectioned stem.
L 72mm.
Alcock 1995.

**A49 HOT CHISEL**
Southampton, Hampshire.
11th–12th century.
Burred head, rectangular-sectioned stem.
L 73mm.
Harvey 1975b, 276, fig 250.1971.

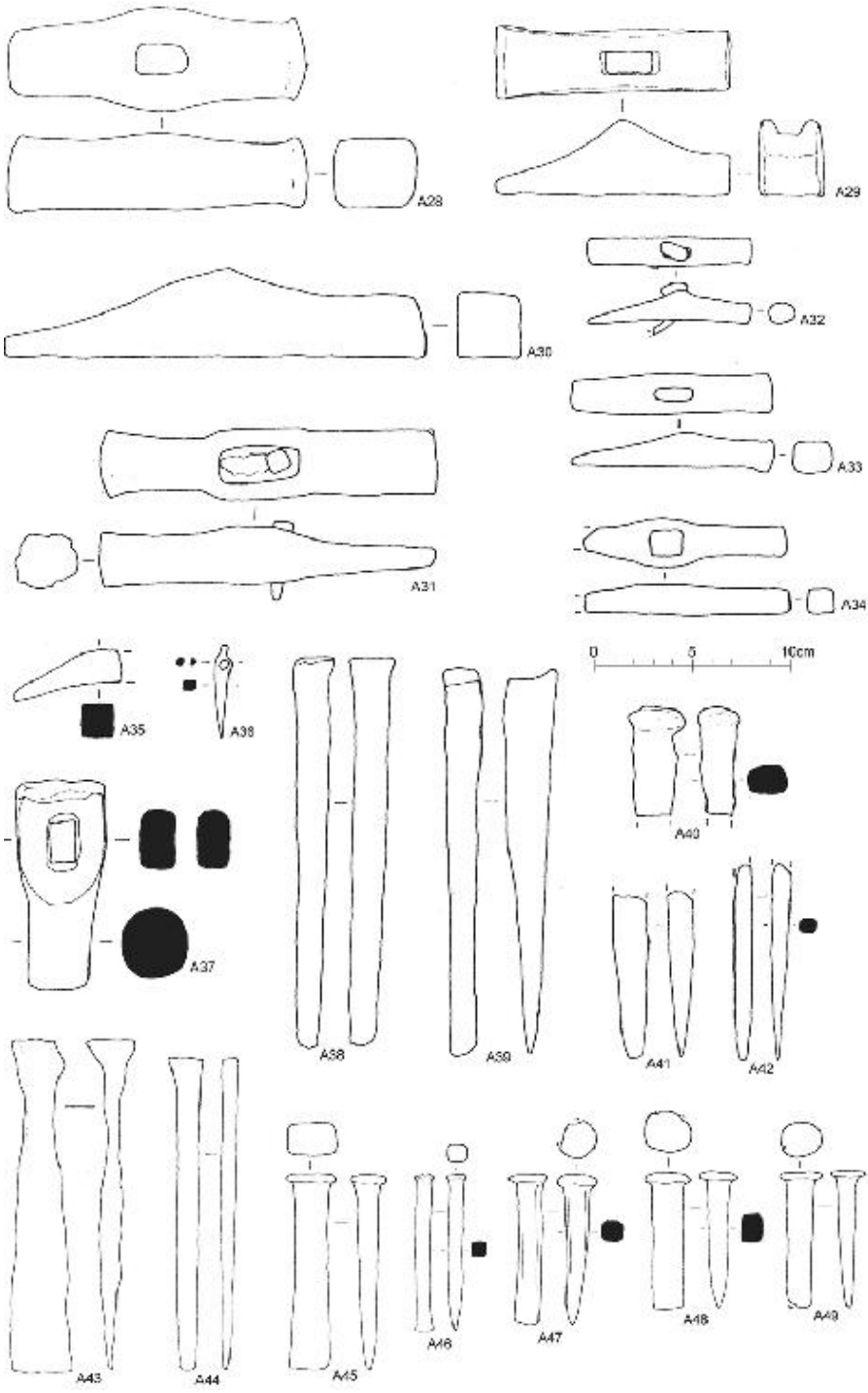



FIGURE 2.5

*Metahvorking tools: Hammers, cold chisels and hot chisels*

**A50 HOT CHISEL**
Winchester, Hampshire.
16th to 17th century.
Burred head, rectangular-sectioned wrought iron stem, steel edge. L 62mm.
Goodall 1990-3, fig 41, no. 43.

**A51 HOT CHISEL**
Winchester, Hampshire.
Early 12th century.
Burred head, rectangular-sectioned wrought iron stem, steel edge. L 45mm.
Goodall 1990-3, fig 41, no. 42.

**A52 COLD SET**
Waltham Abbey, Essex.
12th–13th century.
Broken, octagonal-sectioned stem. L 156mm.
Goodall 1973a, 170, fig 11.14.

**A53 COLD SET**
Waltham Abbey, Essex.
With derived 12th, 13th century pottery.
Burred head, broken rounded-sectioned stem. L 116mm.
Goodall 1973a, 170, fig 11.17.

**A54 COLD SET**
Waltham Abbey, Essex.
Late 13th, early 14th century.
Broken, octagonal-sectioned stem.
L 111mm.
Goodall 1973a, 170, fig 11.13.

**A55 HOT SET**
Goltho, Lincolnshire.
Late 14th to early 15th century. From floor of smithy.
Burred head, asymmetrically shaped blade of rectangular section. L 77mm.
Goodall 1975a, 87, fig 41.90.

**A56 PUNCH**
Hen Blas, Clwyd.
Probably 13th century.

Rectangular section, tip damaged. L 148mm.
Leach 1960, 23, fig 13.13.

**A57 PUNCH**
Kettleby Thorpe, Lincolnshire.
14th to early 15th century.
Burred head, rectangular-sectioned stem.
L 104mm.
Goodall 1974a, 33, fig 18.12.

**A58 PUNCH**
Winchester, Hampshire.
Late 13th century.
Rectangular section. L 102mm.
Goodall 1990-3, fig 41, no. 45.

**A59 PUNCH**
Hen Caerwys, Clwyd.
Around 1450–1520.
Broken, rectangular-sectioned stem. L 88mm.
Excavated by G B Leach.

**A60 PUNCH**
Loughor Castle, West Glamorgan.
Site *c*1106 to late 13th century.
Burred head, rectangular-sectioned stem.
L 204mm.
Excavated by J M Lewis.

**A61 PUNCH**
Hen Blas, Clwyd.
12th–14th century.
Circular-sectioned stem becoming rect-angular. L 132mm.
Leach 1960, 23, fig 13.15.

**A62 PUNCH**
Hen Blas, Clwyd.
12th–14th century.
Circular-sectioned stem becoming rect-angular. L 112mm.
Leach 1960, 23, fig 13.16.

**A63 PUNCH**

Dyserth Castle, Clwyd.
Site 1241–63.
Broken, rectangular-sectioned stem. L 61mm.
Glenn 1915.

**A64 PUNCH**
Winchester, Hampshire.
12th century.
Rectangular-sectioned stem. Mostly ferrite and slag. L 58mm.
Goodall 1990-3, fig 41, no. 44.

**A65 PUNCH**
Dyserth Castle, Clwyd.
Site 1241–63.
Rectangular-sectioned stem. L 57mm.
Glenn 1915.

**A66 PUNCH**
Waltham Abbey, Essex.
Lowest silt in well dug *c*1300, filled in late 15th, early 16th century.
Burred head, octagonal-sectioned stem tapering to oval tip. L 102mm.
Goodall 1973a, 170, fig 11.19.

**A67 PUNCH**
Gomeldon, Wiltshire.
13th–14th century.
Burred head, circular-sectioned stem.
L 73mm.
Musty and Algar 1986.

**A68 PUNCH**
Northolt Manor, Greater London.
1300–1350 with 13th-century residual material.
Burred head, octagonal-sectioned stem, rounded tip. L 199mm.
Excavated by J G Hurst.

**A69 PUNCH**
Gomeldon, Wiltshire.
13th–14th century.
Burred head, square-sectioned stem.
L 101mm.
Musty and Algar 1986.

**A70 PUNCH**
Dyserth Castle, Clwyd.
Site 1241–63.
Burred head, octagonal-sectioned stem becoming rectangular. L 83mm.
Glenn 1915.

**A71 PUNCH**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Burred head, rectangular-sectioned stem slightly waisted below head. L 92mm.
Goodall 1975a, 87, fig 41.88.

**A72 PUNCH**
Northampton.
Later 14th–15th century.
Burred head, rectangular-sectioned stem.
L 89mm.
Goodall 1979b, 71, fig 17.18.

**A73 PUNCH**
Waltham Abbey, Essex.
12th–16th century.
Burred head, rectangular-sectioned stem.
L 108mm.
Goodall 1973a, 170, fig 11.20.

**A74 PUNCH**
GLastonbury Tor, Somerset.
Probably 10th–11th century.
Rectangular-sectioned stem, shaped tip.
L 141mm.
Rahtz 1970, 53, fig 23.8.

**A75 PUNCH**
Thetford, Norfolk.
11th century.
Rectangular-sectioned stem, tapering to head and shaped tip. L 98mm.
Goodall 1984.

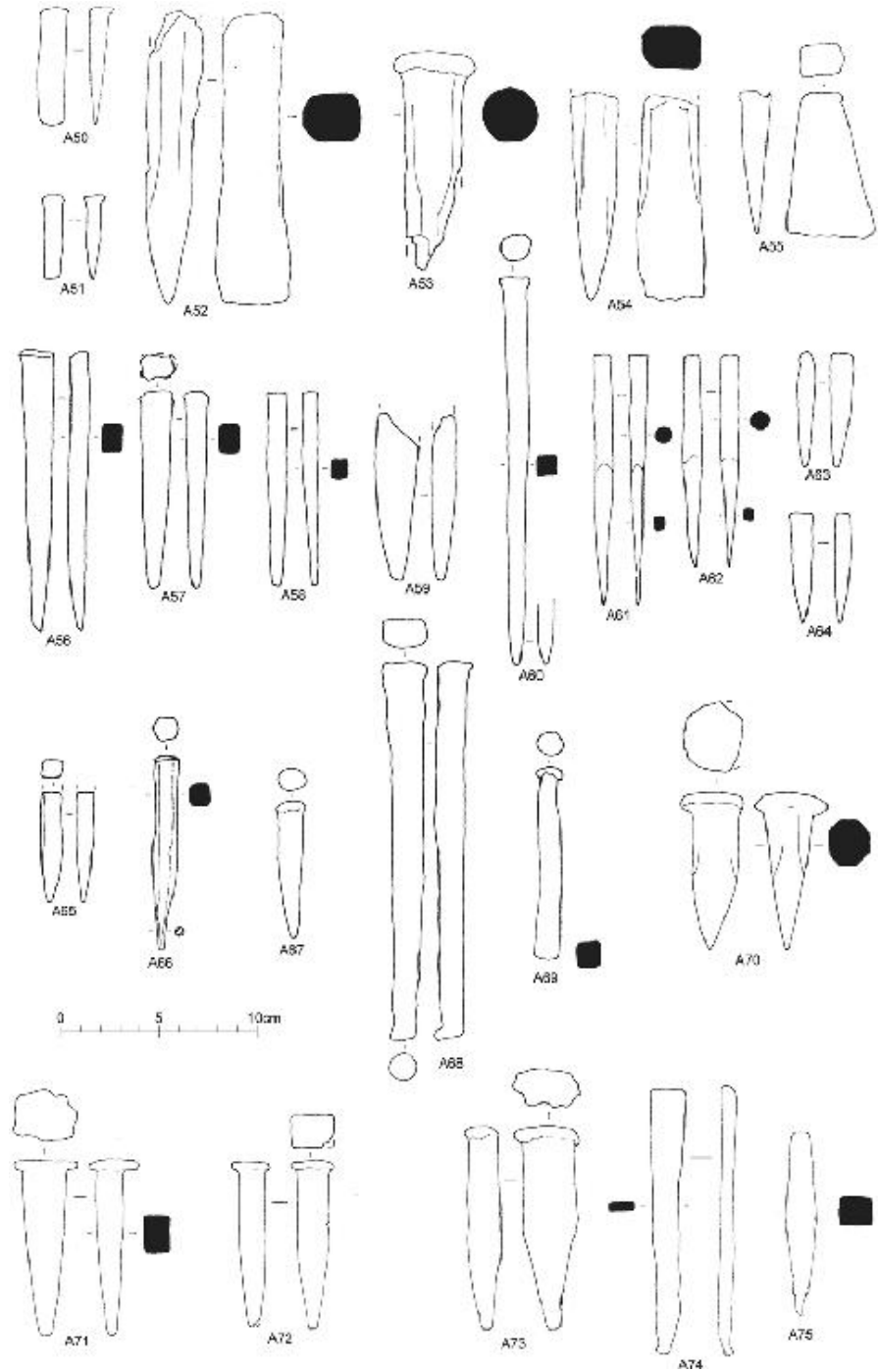



FIGURE 2.6
*Metahvorking tools: Hot chisels, cold and hot sets, and punches*

**A76 DRIFT**

Castell-y-Bere, Gwynedd.
Site *c*1221–95.
Damaged rounded-sectioned head becoming rectangular. L 182mm.
Butler 1974, 97, fig 8.12.

**A77 DRIFT**
Weoley Castle, West Midlands.
Around 1270–*c*1380.
Rounded-sectioned head becoming square.
L 163mm.
Taylor 1974; Oswald 1962, 25.

**A78 DRIFT**
Waltham Abbey, Essex.
16th century.
Circular-sectioned stem becoming square.
L 103mm.
Goodall 1973a, 170, fig 11.18.

**A79 DRIFT**
Alsted, Surrey.
Around 1270–1400. From ironworking site.
Rounded-sectioned stem becoming rect-angular at blade. L 85mm.
Goodall 1976a, 56, fig 35.38.

**A80 DRIFT**
Cambokeels, Durham.
Later 14th to early 16th century.
Rectangular-sectioned stem. L 84mm.
Bowes Museum, Barnard Castle. For site see Hildyard and Charlton 1947; Hildyard 1949.

**A81 DRIFT**
Hen Caerwys, Clwyd.
Around 1450–1520.
Rectangular-sectioned stem. L 81mm.
Excavated by G B Leach.

**A82 DRIFT**
Southampton, Hampshire.
12th century.
Rectangular-sectioned stem. L 75mm.

Harvey 1975b, 277, fig 250.1974.

**A83 DRIFT**
Seacourt, Oxfordshire.
Pre-1400.
Broken, rectangular-sectioned stem. L 62mm.
Biddle 1961–62, 177, fig 30.2, scale 1:4, not 1:3.

**A84 DRIFT**
Bramber Castle, West Sussex.
14th century. From workshop area in M1.
Rectangular-sectioned stem, circular at tip.
L 70mm.
Barton and Holden 1977, 64, fig 20.2.

**A85 DRIFT**
Bayham Abbey, East Sussex.
Late 15th, early 16th century.
Rectangular-sectioned stem. L 68mm.
For site see Streeten 1983.

**A86 FULLER** (?)
Kilton Castle, Cleveland.
15th century.
Burred head, shaped rectangular-sectioned body. L 100mm.
Excavated by F A Aberg.

**A87 MANDREL** (?)
Dyserth Castle, Clwyd.
Site 1241–63.
Tapering circular-sectioned body, whittle tang. l 126mm.
glenn 1915. Natural Museum, Wales, Cardiff, 15-248/14.

**A88 MANDREL** (?)
Dyserth Castle, Clwyd.
Site 1241–63.
Tapering circular-sectioned body, whittle tang. l 71mm.
Glenn 1915. Natural Museum, Wales, Cardiff, 15-248/21

**A89 MANDREL** (?)
Writtle, Essex.
Around 1306–*c*1425.

Rectangular-sectioned arm with double-riveted tang. L 166mm.
Rahtz 1969b, 87, fig 48.71.

**A90 MANDREL** (?)
Weoley Castle, West Midlands.
Site *c*1270 –1600.
Rectangular-sectioned arm with double-riveted tang. L 124mm.
Birmingham City Museum, 18341. For site see Oswald 1962.

**A91 NAIL-HEADING TOOL** (?)
Cambokeels, Durham.
Later 14th to early 15th century.
Broken strip with three differently sized countersunk holes. L 82mm.
Hildyard 1949, 199, fig 3.18.

**A92 FILE**
Manor of the More, Rickmansworth, Hertfordshire.
1520–30.
Flat file with diagonally cut teeth and whittle tang, incomplete. L 136mm.
Biddle *et al* 1959, 184, fig 19.36.

**A93 POKER**
Huish, Wiltshire.
From hearth in 14th to mid 15th century smithy.
Roughly circular-sectioned poker, tip lost, socket damaged. L 290mm.
Shortt 1972, 120, fig 4.

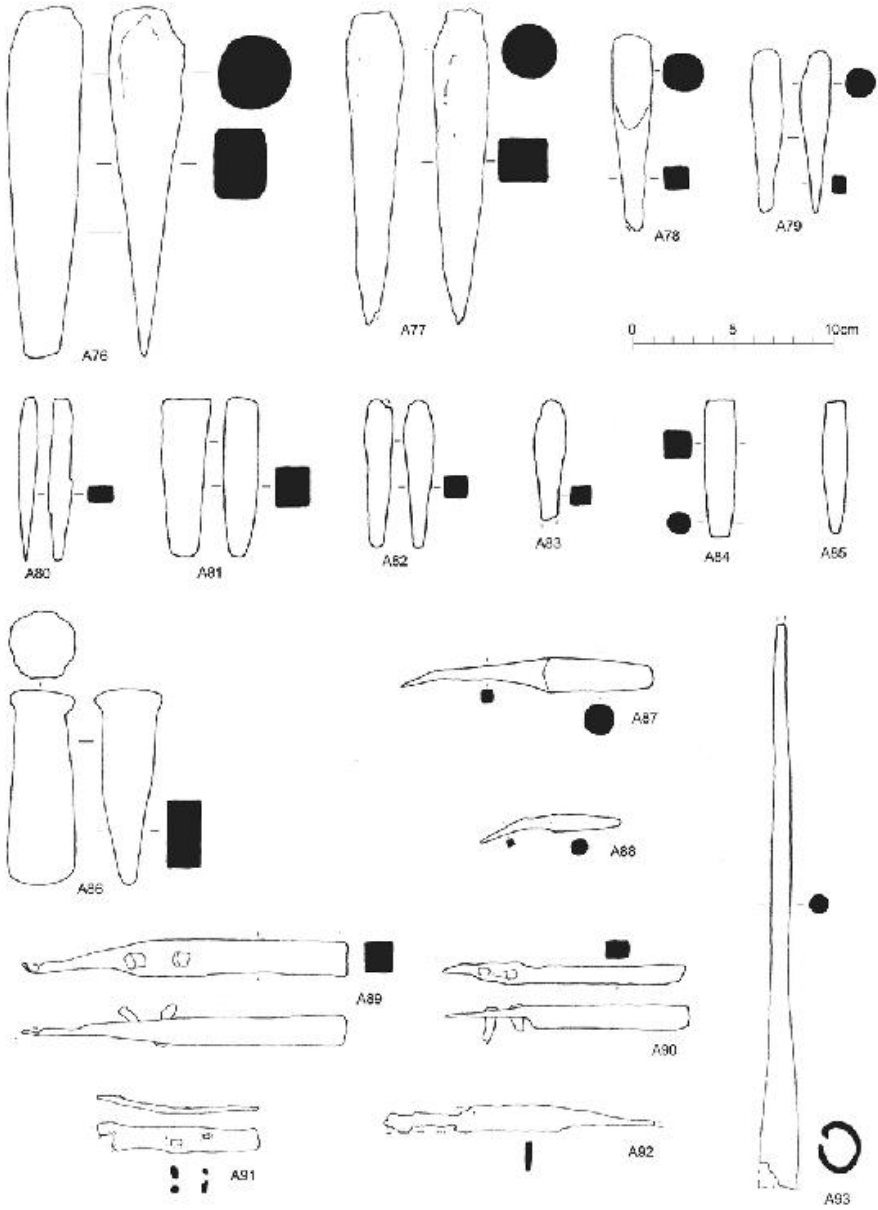



FIGURE 2.7

*Metalworking tools: Drifts, fuller, mandrels, nail-heading tool, file, and poker*

# 3
# Woodworking Tools

Woodworking was one of the most important crafts of the medieval period, embracing such trades as those of the carpenter, wheelright, millwright, and shipwright. Wooden building remained the rule during the medieval period, just as it had before, and it is of interest that even in the royal establishment as late as 1344 there were 138 carpenters against only 24 masons (Harvey 1975a, 123).

Tools used in the woodworking and allied trades range from those used for felling, splitting and sawing timber to those used for shaping, fitting and even dismantling it.

## 3.1 Axes

The axe, the woodworker's basic tool, was used for felling trees, splitting and trimming trunks and branches, and smoothing and dressing a range of timbers from posts and planks to spokes. Modern crafts have, or had, specialised axes which feature in trade catalogues (Salaman 1975, 46–66), but the diversity of forms which these demonstrate must be comparatively modern. Medieval axes, which must have been used for as many purposes, are not as infinitely varied and can be divided into six main types, excluding battle-axes. Types 1–6 (Figure 3.1) may be correlated with Ward Perkins' classification (1967, M55–63) as follows:

1, 2 = I
3 = III
4 = II
5 = IVB
6 = IVA

The named parts of the axe are shown in Figure 3.2. Medieval woodworking axes, including those used for dressing planks, generally have blades with a sharpening bevel on both sides of the cutting edge, and few have fully developed sockets. Stamped marks are found on only one axe, and that is from a late Saxon to 17th-century context, and no axe has any decoration on the

blade. The illustrated axes in the *London Museum Medieval Catalogue* undoubtedly incorporate a significant number of post-medieval axes (Ward Perkins 1967).

## Type 1

The woodman's axe (Type 1), a sturdy tool with a thick, heavy blade, was mounted in a long handle and used for felling trees and cutting and splitting trunks in the manner shown in the Bayeux Tapestry (Stenton 1957, 16, pl 38). The known medieval examples **B1–10** have flaring symmetrical blades and lugs, which are generally rounded, above and below the eye, to enable the handle to be securely hafted. Most of these axes, when sufficiently complete, have polls or thickened butts which make them steadier to handle and easier to direct, and also allowed them to be used as hammers or be hammered themselves. A Bible of *c*1100 (Ward Perkins 1967, 56) shows such an axe being used with a heavy mallet to split a log. Felling axes seem also to have been used for trimming logs, the carpenter cutting such notches in the log as a guideline for trimming and then chopping out larger V-shaped cuts before working along the side of the plank, cutting deeply and splitting off wood close to the line. Two 16th-century illustrations by Rodler (Salzman 1967, 196) and Jost Amman (Rifkin 1973, 95; Goodman 1964, 30) show this method in use, and each also shows a bearded axe lying in wait for subsequent close trimming and smoothing.

## Type 2

Axes of Type 2 have asymmetrically flaring blades with down-turned rear edges, the larger examples of which may have been used as felling axes in the manner of Type 1 axes. In general, however, they are slighter in construction and lack the poll of the other axes, and are likely to have been used as hatchets for lopping and chopping wood. The larger axes **B13–14** have lugs below the eyes, but the smaller axes **B11–12** are plain.

Axes **B12–14** show the usual method of forging axes by wrapping the iron around the eye and hammer-welding it against the back of the blade.

## Type 3

Type 3 axes have long, narrow rectangular blades attached to sockets by slender shanks, and the Bayeux Tapestry (Stenton 1957, 169, pls 38, VII) shows such axes being used by carpenters dressing planks and shipwrights trimming them. This type of axe, known from a number of pre-Conquest sites, is one of the most common types of axe shown in medieval representations of carpentry, appearing as late as the 14th century (Ward Perkins 1967, 58). The incomplete blade and shank fragment **B15** is, however, the only firmly dated medieval example.

## Type 4

Axes with triangular-shaped blades constitute Type 4, and were probably used for trimming and dressing timber. The fore-edges of **B16** and **B18** are straight and rise in line with the eye, but that of **B17** is slightly curved.

## Type 5

Type 5 axes have bearded blades with pointed heels set below the base of the eye or socket. These axes were probably used for trimming, a job for which their broad blades are well suited. The complete axes **B19–21** all have polls and lugged eyes, the poll being particularly suitable for heavy hammering, including the pounding together of joints in timber-framed buildings. **B22** is an incomplete blade fragment.

## Type 6

Type 6 axes have bearded blades with flat heels set below the base of the eye or socket. **B23–25** conform to the type of side-dressing axe shown in the 16th-century illustrations noted above. The axes were lying around waiting to be used for trimming once the main waste wood had been removed by stouter axes. **B23–24** have sockets, and although **B25** has the more usual medieval lugged eye, it may nevertheless be of post-medieval date. It is unusual in having its blade set to one side, viewed from above.

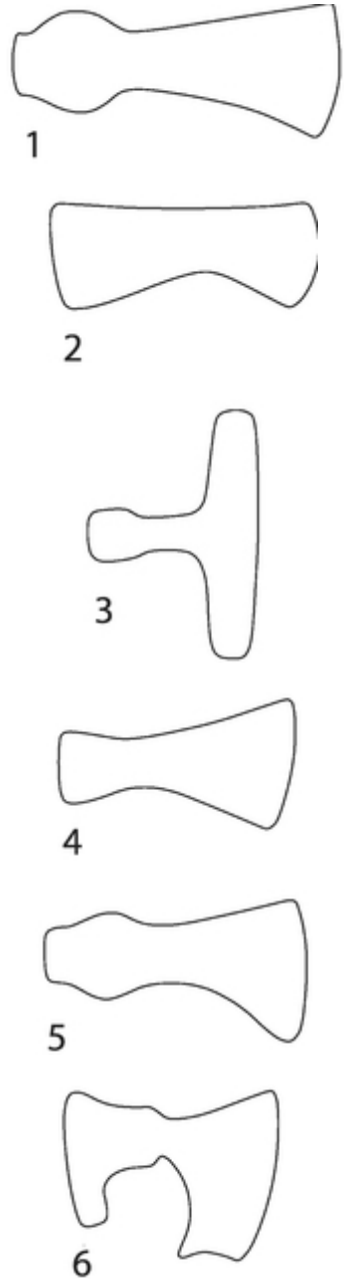



FIGURE 3.1
*Types of medieval axe*

## Axe fragments

**B26–27** are blade fragments retaining part of the cutting edge, each however

too incomplete to classify.

## 3.2 Adzes

Adzes, which differ from axes by having their blades set at right angles to the handle, are used for removing heavy waste, levelling, shaping or trimming the surfaces of timber. There are few actual medieval examples, but variation in blade forms amongst those that survive reflects the range of jobs they had to perform. The broad blade of **B28** is suitable for adzing planks, but more specialised adzing will have been carried out by **B29–30** which have narrow, slightly flaring blades. The slender poll of these latter adzes was used to drive in nails which could not be removed from timber but which had to be driven in sufficiently to be cleared by the adze blade. Salzman (1967, 342) notes that during work at Restormel Castle in 1343 6d was spent on 'an ades for smoothing old timber, because the timber is so full of nails that the carpenters would not set their own tools to it', and more recently Mercer (1968, 92–93) records that early 20th-century shipbuilders also used the peg-shaped hammer polls of their adzes to sink the nails below adze level. It is of interest that the shipwright in the Bayeux Tapestry (Stenton 1957, 169, pls 38, VII) appears to be using a short-handled adze with broad blade and poll.

Adzes **B29–30** may just be narrow enough to have been used for cutting mortices, which is what **B31** with its simple eye and narrow, parallel-sided blade must have been used for. Mortices were often started with augers and chisels, but adzes are likely to have been used for those in the major posts of timber-framed buildings, and for long chase mortices.

## 3.3 Slices

The slice is a long, broad chisel with a socketed handle which was driven by hand pressure rather than by a mallet. The tool is used with a planing and pushing action to pare-off shavings, and is employed by the shipwright for fairing and removing waste from the deck and elsewhere, and especially from places where the adze cannot reach. It also has a more general application for cleaning up the sides of large mortices in construction work and for levelling surfaces.

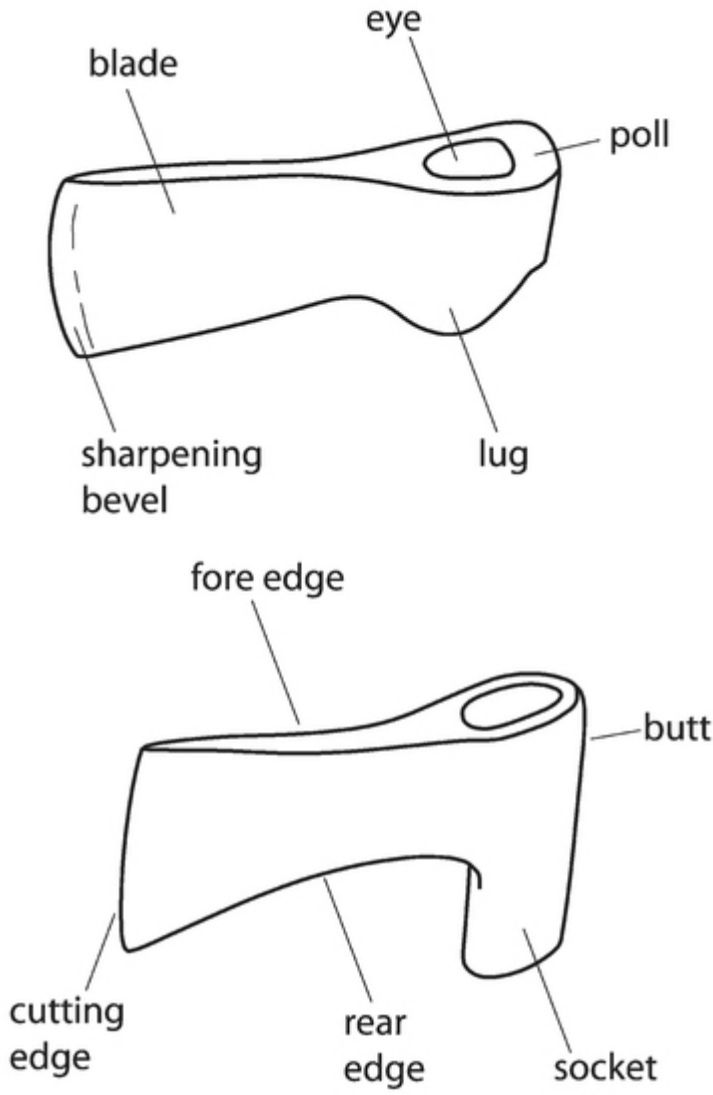



FIGURE 3.2
*Axes: Terminology*

The modern slice (Salaman 1975, 143–144; McGrail 1977, 62–63) has a blade 50–100mm in breadth and up to 760mm in overall length. The deep socket, frequently flanged on the older tools, has a flat lower face set in line with the back of the blade in order to keep the hand clear when paring a flat surface. **B32–33** have blades which are characteristically bevelled only on the upper face, **B33** having a worn blade and retaining part of its wooden handle. Both these slices come from contexts more appropriate to general carpenters' tools than those of shipwrights.

## 3.4 Chisels

Woodworking chisels with narrow rectangular blades sharpened at one end and hafted at the other are used for edging, notching, hollowing and morticing wood, and for carving it. They are subdivided according to the shape and thickness of the blade, which determined the type of work undertaken, and the main groups are firmer, paring, morticing, and carving chisels.

Firmer chisels are general purpose tools with a flat blade with parallel sides strong enough to be struck with a mallet. They are used to roughly side-cut wood along a scribed line prior to finer paring as well as to cut out mortices already begun with an auger. Modern firmer chisels often have a single bevel to the cutting edge combined with bevelled edges for better clearance when working in corners (Salaman 1975, 139) but **B34**, probably a firmer chisel, has a plain blade with a double bevelled cutting edge.

Paring chisels, which cannot always be distinguished from firmer chisels, generally have long, thin, lighter blades and are used with shoulder or hand pressure rather than with mallets. In woodworking they followed the firmer chisel, smoothing its rough cuts and being used for fine paring and trimming. **B35**, probably a paring chisel, has a plain blade with a double bevelled cutting edge.

Morticing chisels used with mallets have stout blades with a sharp bevel to the cutting edge. These chisels, as their name implies, were used to cut mortices and the like direct from the wood without the preliminary augering associated with the use of firmer chisels on the larger mortices. **B36** is an incomplete morticing chisel with a single bevelled cutting edge, and **B37–38** are similar incomplete blades.

**B39**, apparently with a blade at either end, may be a carver's tool. The flaring blade resembles the modern spade chisel used in carving during lighter finishing operations (Salaman 1975, 126, fig 205m).

## 3.5 Gouges

Gouges are similar to chisels but have hollow cross-sectioned blades for cutting curved surfaces. No medieval gouge is yet known.

# 3.6 Auger Bits

Augers with iron bits set in transverse wooden handles were used to bore holes in wood. Timber-framed buildings, roof trusses, and other timber constructions including smaller items such as furniture and panelling required holes for wooden pegs, and augers were also used to start cutting mortices which were then finished with firmer chisels. Small bits were used for such purposes as boring holes in knife and tool handles for the insertion of whittle tangs. Medieval documents (Salzman 1967, 345) record 'an iron augur for making holes in bemes' at Westminster in 1443, and a 'waternawger' in 1404 and a 'wateravger' in 1419, both needed for work at London Bridge. Representations of augers show straight and winged handles being worked with two hands, as well as breast augers which were given additional force by pressing the chest on a pad set on top of the shank. Salzman (1967, 345) notes that breast augers are mentioned in ship-building accounts but apparently not in ordinary building accounts, and the Bayeux Tapestry (Stenton 1957, 169, pls 38, VIII) clearly shows one in use during the construction of a ship, as does a medieval manuscript illustrated by Mercer (1968, fig 162). Larger augers with tapering blades were used by wheelwrights to hollow the inside of the felloes of wheels, as an illustration by Jost Amman shows (Rifkin 1973, 97). In common with many other medieval tools, the blades of auger bits must often have been steeled. The London Bridge accounts record the payment of 4d in 1382 'for steeling a nauegore' (Salzman 1967, 345).

Auger bits are of three main types: spoon bit, gouge bit and twist bit, each with a shank and terminal which fitted into a wooden handle. The terminals are lanceolate, tapered or eyed, the latter as yet only represented in manuscript illuminations. The lanceolate and tapered terminals seem to have fitted loosely into rectangular holes in the wooden handles, since none shows signs of having been pinned or riveted in position, or having had a clenched tip. The lanceolate terminal, tapering in side view from a broadened base, is the most common as well as the most practical form since it gave plenty of leverage to the handle. The tapering terminal, rather like that of an auger would cause the edges of the head to rub the socket in the handle, eventually rounding it and preventing the bit turning fully and cutting efficiently.

## Blanks for auger bits

The forge at Waltham Abbey in Essex produced six blanks for auger bits, a typical example **B40** having a lanceolate terminal yet to be drawn out and a

shank awaiting the blade. The blank is probably of wrought iron to which a steeled blade would have been forged.

## Spoon bits

Spoon bits are the most common type of auger bit to be found, surviving in greater numbers and with a wider size range than either gouge or twist bits. The blades have a gouge-shaped body with a spoon-like nose, both the edges and nose being sharpened. The spoon bit cut chiefly downwards, ceasing to cut sideways as soon as the maximum width of the blade was reached. Most blades have parallel edges, although a number have a slight taper. The spoon bit is efficient since the sharpened edges enabled it to cut when rotated in either direction, and the sharpened nose cut the centre of the hole, leaving no core.

Medieval spoon bits have been classified according to terminal form and catalogued in increasing order of size.

### *Type 1*

Spoon bits with lanceolate terminals **B41–68** range in length from 77mm to 415mm, and their blades in width from 4mm to 27mm. The terminals are generally an elongated lozenge shape in front view, the elongation sometimes being extreme, and the shanks are generally rectangular or octagonal in section. The smaller bits have blades which are proportionately longer in relation to the length of the shank than the larger bits partly as a consequence of their size and partly because the upper part of the blade held the shavings during use, the nose allowing them to be withdrawn from the whole which was thus kept clean. The narrowest blades, particularly those of **B41**, **B44**, **B48–49**, **B51–52** and **B57**, are suitable for boring holes in knife handles whereas the widest, **B62**, **B64**, **B67–68**, are better suited for starting mortices and drilling peg-holes for major structural timbers.

### *Type 2*

**B69–71**, the few spoon bits with tapering terminals, grade in size from 95mm to 247mm in length, their blades from 6mm to 14mm in width. The shanks are again rectangular or octagonal.

### *Type 3*

Representations of augers not infrequently show wooden handles set through the eyed terminal of a spoon bit. Rodler's illustration of 1531 (Salzman 1967, 196) shows just such a spoon bit in the foreground. No actual medieval example is yet known, but earlier and later examples of the type all seem to be larger bits used for building or boat construction. The eye would allow considerable pressure to be exerted on the bit.

### *Incomplete spoon bits*

**B72–73** are spoon bits with broken shanks lacking their terminals.

## Gouge bits

Gouge bits have hollowed blades sharpened along the edges and a sharpened nose which is either cross-cut or rounded downwards but never spoon-shaped. In contrast to the spoon bit, the gouge bit produces a cylindrical cut in the wood, leaving a plug-like core which has to be removed, and in consequence gouge bits are smaller in length and blade width than spoon bits, ranging from 90mm to 170mm in length and from 6mm to 13mm in width.

### *Type 1*

Gouge bits **B74–79** have lanceolate terminals. The blades vary considerably in depth and have cross-cut and rounded noses.

### *Type 2*

**B80** has a tapering rectangular terminal and a cross-cut nose.

### *Incomplete gouge bits*

**B81–82** have broken shanks and lack their terminals, but both have rounded

noses, the former more acutely shaped.

## Twist bits

Twist bits have solid shanks, rounded or rectangular in section, with a short spiral groove at the tip, and are suitable for cutting small round holes in timber, particularly for boring pilot holes for nails, etc, where the cleanness of the hole is not of great importance. Doors of ledge and batten construction may have the ledges pegged to the battens, but nails driven through strap hinges to fix them to this double thickness of wood would not have gone in straight and holes were probably bored for them, as was done on the 12th-century church door at Stillingfleet, North Yorkshire (Addyman and Goodall 1979, 90, fig 9).

The twist bit is today called a gimlet bit and is, like the gimlet, in effect a miniature auger (Salaman 1975, 82, 208). Salzman (1967, 345) quotes a 15th-century poem which mentions a 'wymbylle', that is, a wimble or gimlet, but otherwise the only reference he records is mention of a 'gemelot' at Nottingham in 1416. **B83–86** are twist bits, although **B84** is not certainly medieval, and its shank with its thickened, parallel-sided section immediately below the head differentiates it from **B83** and **B85**. Three of the bits, however, are certainly late medieval.

### *Type 1*

**B83–85** are twist bits with tapering rectangular heads, the most practical type for these small bits which range from 130mm to 140mm in length and from 4 to 8mm in blade width. Such bits would not require the pressure needed to justify a lanceolate head.

### *Type 2*

Twist bits with eyed heads are known amongst modern tools as shipwrights gimlets (Salaman 1975, 208, fig 209, nos 1955–56), but no medieval example is known.

### *Incomplete twist bits*

**B86** is an incomplete bit lacking its head.

### Incomplete auger bits

**B87–92** are auger bits with heads and incomplete shanks or blades, the latter unclassifiable. All have lanceolate heads.

## 3.7 Saws

Saws were used in woodworking to convert trees into planks, to make joints, and for general bench work, and the range of types available reflects these diverse uses Few actual medieval saw blades survive but according to Goodman (1964, 125) pictorial representations indicate that four main types were in use, namely the large frame or pit-saws used for ripping timber into boards, the small frame saw for bench work, the hand-saw, and the two-man cross-cut saw.

Saw teeth are cut in differing ways (Salaman 1975, 405), with rip teeth, for cutting along the grain, filed straight across at right angles and presenting a series of chisel-like edges which cut away the wood. Cross-cut teeth, for cutting across the grain, are filed at an angle of about 60 degrees in alternative directions. The tips of these teeth, known as points, sever the wood fibres, and most modern saws have them bent or set sideways, alternately right and left, in order to cut a kerf or saw-cut slightly wider than the thickness of the blade to prevent it binding in the wood.

### Large frame saws

Axes are shown in use in the Bayeux Tapestry (Stenton 1957, 169, pls 37–38) felling trees needed for building the invasion fleet, and the axe and wedge appear to have been usual tools used in medieval tree felling. Tree trunks, if not split with an axe and wedge, were sawn with pit-saws. The term pit-saw is to some degree a misnomer, since in addition to being sawn over a pit, timber was also mounted on a sawing horse or on trestles for the same purpose. Salzman (1967, 343) notes that there are occasional references to the digging of saw-pits. In 1535, when Hengrave Hall was being built, 10s 8d was paid ‘for makyng xvj sawye pitts at Sowe wood’, and in the same year, after timber had

been sawn for use at Hampton Court, 20 saw-pits were filled up. The saw-pit was in fact a trench in which the bottom sawyer stood, with the timber supported over the pit and the top sawyer standing on top guiding the saw. Excavations at Barton Blount, Derbyshire, revealed an early 15th-century saw-pit 3.20m long, 0.91m wide, 1.83m deep, with oak and ash sawdust at the bottom (Beresford 1975, 45, fig 20, pl VB). Goodman (1964, 132) notes that medieval representations often show the timber mounted on a trestle, as in a 15th-century illustration reproduced by Salzman (1967, pl 19), or on a trestle and crutches. Salzman (1967, 343) notes only a single reference to trestles, in the account for building 'The Bell' at Andover in 1534, where there is mention of 'grett naylis to make sawyng trestilles'. No pit-saw blade fragment is yet known.

## Cross-cut saws

The cross-cut saw with a straight blade of the same width throughout and two large handles at each end (Goodman 1964, 143) is thought by Salzman (1967, 342–343) to be the equivalent of the whip-saw of medieval documents. It was used for sawing up planks into smaller sections, but no specimen survives.

## Small frame saws

Pictures of joiners' and cabinet makers' workshops show small frame saws with the blade set in the lower part of a wooden frame (Goodman 1964, 126–127, fig 134). The frame, following modern terminology (Salaman 1975, 409, figs 598, 617) has straight or curved side-pieces or cheeks with a central bar or stretcher between and a blade kept in tension by a cord between the tops of the sidepieces. A toggle stick is used to adjust the cord. **B93–94** are probably from such saws the latter retaining a hole which may have been used to hold it in the frame.

## Hand-saws

Hand-saws were used for cutting up timber, and modern examples (Salaman 1975, 421) have their teeth sharpened either for ripping along the grain or for cross-cutting. Smaller hand-saws with thinner blades were used for making joints and for general bench work.

An inventory of York Minster in 1399 mentions a 'handsagh', two 'handsawes' are also listed at Durham in 1404, and the l ondon Bridge accounts mention a 'tenonsawe' in 1423 (Salzman 1967, 343). The modern tenon-saw or back-saw has a thin rectangular blade stiffened on the back by a strip or iron, but it is improbable that the medieval tenon-saw was so formed.

**B95** is a medieval hand-saw which, like modern examples, has a blade which tapers towards the tip and in cross-section tapers from the cutting edge to the back in order to minimise friction in the kerf and reduce binding. The points of the teeth slope away from the handle, and **B95** is therefore a push-saw which acted when pushed away from the user. The teeth are slightly cross-cut, that is set alternatively to opposite sides, in order to enlarge the kerf.

## 3.8 Drawknives

Drawknives, used for removing surplus wood and for rounding and chamfering, are capable of removing much wood quickly. The common form of modern drawknife (Salaman 1975, 175) consists of a flat or curved blade some 203–457mm in length and up to about 75mm in width, bevel-ground on the front edge, with tapering tangs for wooden handles at each end bent round to point in the direction of the cutting edge. **B96** is part of the curved blade of a medieval drawknife whose incomplete tang would originally have been clenched over the end of the wooden handle to prevent the two parting, since the tool was drawn towards the user.

## 3.9 Shaves and Spokeshaves

Shaves and spokeshaves are used to shave and smooth wood, especially circular work such as handles, spokes, casks, etc, and both have cutting irons mounted in wooden stocks shaped to form handles at each end (Salaman 1975, 455–463).

The modern wooden spokeshave has a straight stock from 101 to 406mm overall length, the ends cut away to form handles either side of a middle section which has a shaped triangular recess for the iron, itself 38–127mm long and 6–25mm wide. Modern irons have tangs turned up at right angles and inserted into holes in the stock, but **B97–98**, neither necessarily medieval, have straight tangs in line with the blade. Both appear complete, **B97** having shaped

tangs, but the method of securing them in the stock is uncertain. **B99**, with a hole suggesting the use of rivets, may be a spokeshave iron.

## 3.10 Planes

Planes used for levelling, smoothing and shaping the surface of wood have wooden stocks housing a plane-iron or blade which medieval illustrations (Goodman 1964, 56–65) frequently show secured by a wedge. n o medieval plane-iron has yet been recognised.

## 3.11 Files, Rasps and Floats

Files, rasps and floats are all available to the present-day woodworker for smoothing and shaping wood. Woodworkers' files are likely to be more coarsely cut than the metalworkers' to prevent the face blocking with dust. The rasp is like the file, but unlike it has teeth formed separately with a punch rather than the straight grooves cut with a chisel. **B100** is probably a float, a very coarsely cut file or rasp with parallel teeth. Modern floats (Salaman 1975, 197) have teeth spaced 4–5 to the inch (25mm) and are occasionally used for cleaning and mortices. They are also used by plane makers for shaping the bed and throat of a plane.

## 3.12 Reamers

Reamers are used for enlarging previously bored holes, and modern examples include the hand-reamer as well as taper bits and auger bits used as part of an auger (Salaman 1975, 83, 86, 40–42, 390–391). **B101–112** are hand-reamers with tapering square shanks 8–19mm in width with tangs inserted into wooden handles. No handles survive, but they were no doubt cross handles.

## 3.13 Claw Hammers

The claw hammer is a general purpose hammer used for driving and extracting nails both by woodworkers and by other craftsmen including blacksmiths and farriers. It is generally impossible to attribute a hammer to a particular craft, and all are therefore considered together, although **B123**, found with a poker and two horseshoes in a smithy hearth at Huish, Wiltshire, must be a farrier's tool.

Medieval claw hammers **B113–126** have flat or gently curved claws, and the strongly down-curved claws of many modern claw hammers are not represented. The flat, straight claws are well adapted for ripping, that is, tearing down partitions and buildings and similar rough work, whilst the greater curvature of the other claws gives more leverage for the extraction of nails. A disadvantage of the claw hammer must have been the tendency of its handle to loosen in the eye or break as a result of leverage applied to the head, and this inherent weakness was counteracted by deepening the eye and sometimes creating a socket, or by extending the sides of the eye down as lugs or as straps. **B113** is plain, but **B114–116** all have deepened eyes, **B116** having a fully developed socket open to one side. **B117–118** have lugs below the eye, **B119–125** side straps which are nailed whenever they are both sufficiently complete and clear. Side straps forged in one with the head can be seen to occur most frequently, and they seem to have been effective in securing the handles. Certainly none of the claw hammers with straps retains any nail or wedge in its eye, as do all those with deepened eyes or sockets. The nails in **B114** and **B116** and wedges in **B115** may be original features, or have been inserted to secure loose heads.

The hammer heads have rounded, polygonal and rectangular faces opposite the claw, and a few (**B113**, **B120**, **B123** and **B125**) are burred from use. **B126** is the claw from a hammer.

A claw hammer from Alsted in Surrey (Goodall 1976a, 56, fig 34.11) with a rounded cheek, the stubs of a strongly down-curved claw, hexagonal face and wooden handle, is certainly a modern intrusion into a medieval level.

## 3.14 Claws

Claw hammers were able to extract nails, and the stouter ones could have withstood considerable leverage, but claws are specifically intended for levering open boxes and cases. Claw **B127** has a cranked shank with upturned claw, **B128** a straight shank with the claw in line, and both were originally hafted in wooden handles. They are both lighter examples particularly suitable

for opening boxes, **B128** resembling the modern so-called 'Gents' o pener', a strip of steel about 200mm long and 25mm wide with a claw at one end and a turned handle at the other (Salaman 1975, 90).

## 3.15 Punches

The nail punch, a short blunt tapering tool, was used to sink nail heads below the surface of wood either for aesthetic reasons or to prevent them catching. B129 is of rounded section and tapers towards both ends.

## 3.16 Pincers

Pincers were used by carpenters and coopers for pulling nails, as well as by blacksmiths and farriers shoeing horses. They are considered above under metalworking tools (**A26–27**).

## 3.17 Wedges

Wedges of differing sizes are used for tree-felling and wood-splitting as well as for securing wooden handles in the eyes of various craft tools.

### Tree-felling and wood-splitting wedges

Tree-felling with axes (Salaman 1975, 488) involved chopping a 'sink' or 'birdsmouth' on the side of the trunk on which the tree was to fall and then enlarging this at the same time as driving large wedges into a cut in the back of the trunk to ease it over and topple it. The large wedges used for this purpose are similar to those used for splitting trunks, the modern cleaving wedge being 100-230mm long and often fluted on both faces (Salaman 1975, 503). **B130–132** are all plain and rectangular in section, and could have been used for either purpose. **B131–132** are both incomplete, although the former retains a strongly burred head, absent on the only complete wedge, **B130**.

### Tool handle wedges

The heads of hafted tools such as axes, picks and hammers must often have been secured on their wooden handles by iron nails and wedges driven into the wood through the top of the eye either at the initial hafting or when they worked loose. Hammers **A31–32** and **B114** and **B116** retain nails, axe **B21**, hammer **B115** and picks, pickaxes and hammer-axes **C14**, **C15** and **C19** retain wedges, and the small wedges **B133–147** may have been used similarly. Some might equally have had structural uses in buildings.

## 3.18 Compasses

Compasses, small examples of which are sometimes called dividers, have straight, equal-length legs connected by a moveable joint, and were used by carpenters and stonemasons to take measurements and describe circles. **B148–151** vary in size and completeness, but all have interleaved joints.

**B1 AXE**
York.
Construction deposit of Baile Hill, raised 1068/9.
Poll, lugs above and below eye, flaring symmetrical blade.
Weight 1.375kg. L 212mm, cutting edge W 72mm (restored).
Addyman and Priestley 1977, 139, 143, fig 10.5

**B2 AXE**
Rhuddlan, Clwyd.
Probably 12th century.
Poll, lugs above and below eye, flaring symmetrical blade.
Weight 1.2kg. L 171mm, cutting edge W 88mm (restored).
Goodall 1994, fig 17.1, no. 1.

**B3 AXE**
Hen Domen, Powys.
First half 13th century.
Flaring symmetrical blade broken across eye. Start of lugs above and below eye. L 215mm, cutting edge W 101mm (restored).
Higham and Rouillard 2000, no. 74.

**B4 AXE**

Ayton Castle, North Yorkshire.
13th century.
Flaring near symmetrical blade broken across eye with lugs above and below. L 159mm, cutting edge W 97mm (restored).
Rimington and Rutter 1967, 60, fig 11.37/18.

**B5 AXE**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Burred poll, lugs above and below eye, flaring symmetrical blade. L 176mm.
Cutting edge W 70mm.
Taylor 1974. For site see Oswald 1962.

**B6 AXE**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Poll, lugs above and below eye which retains ferrified wood from handle, flaring symmetrical blade. L 231mm, cutting edge W 92mm (restored).
Taylor 1974. For site see Oswald 1962.

**B7 AXE** (not illustrated)
Norwich, Norfolk.
In 1507 fire deposit.
Lugs above and below eye, flaring symmetrical blade. L 225mm, cutting edge W 90mm.
Goodall 1993e, fig 130.1385. For site see Carter *et al* 1974–77, 47.

**B8 AXE**
Rhuddlan, Clywd.
?14th century.
Tip from flaring symmetrical blade. L 43mm, cutting edge W 76mm.
Goodall 1994, fig 17.1, no. 2.

**B9 AXE**
Hangleton, West Sussex.
Around early 14th century.
Tip from flaring symmetrical blade. L 73mm, cutting edge W 47mm.
Holden 1963, 171, fig 37.10.

**B10 AXE**
Hull, Humberside, East Riding of Yorkshire.

15th century.
Tip from flaring symmetrical blade.
L 78mm, cutting edge W 41mm.
Goodall 1977b, 65, fig 27.76.

**B11 AXE**
North Elmham Park, Norfolk.
*c*1050 –*c*1150.
Plain eye, flaring asymmetrical blade with down-turned rear edge. L 145mm, cutting edge W 56mm.
Goodall 1980a, 513, fig 166.49.

**B12 AXE**
East Hill Farm, Houghton Regis, Bedfordshire.
*c*1000–1400.
Plain eye, flaring asymmetrical blade with down-turned rear edge. L 166mm, cutting edge W 57mm (restored).
Luton Museum and Art Gallery, L/5/338/38.

**B13 AXE**
Baconsthorpe Castle, Norfolk.
*c*1440–1560.
Lug below eye, flaring asymmetrical blade with down-turned rear edge. L 197mm, cutting edge W 88mm.
DAMHB Reserve Collection.

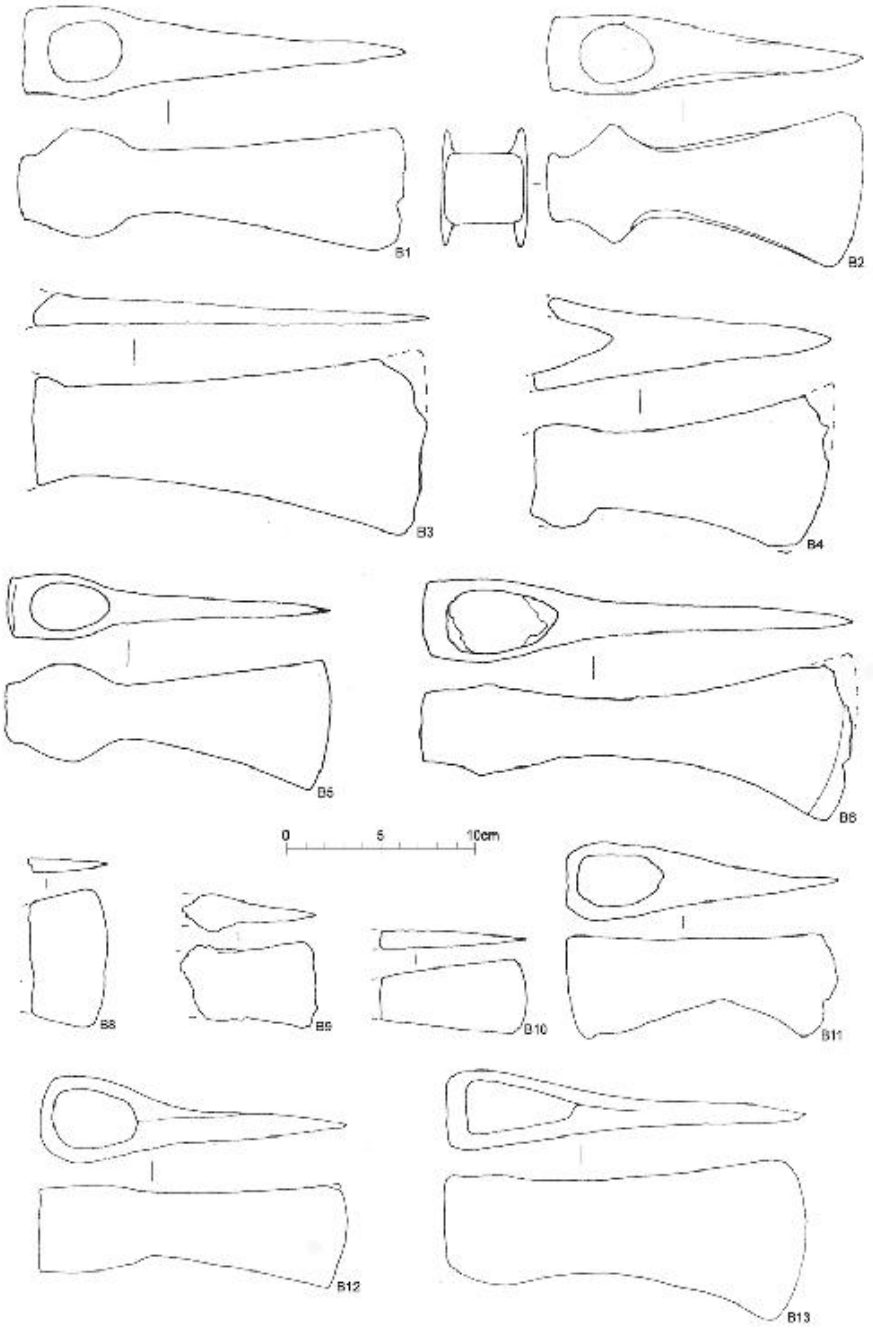



FIGURE 3.3
*Woodworking tools: Axes*

**B14 AXE**
West Whelpington, Northumberland.

Topsoil in croft with medieval and post-medieval occupation.
Lugs below eye, flaring asymmetrical blade with down-turned rear edge.
L 192mm, cutting edge W 93mm.
For site see Jarrett 1962; 1970.

**B15 AXE**
Winchester, Hampshire.
Probably mid 12th century.
Incomplete blade and shank. L 141mm.
Cunliffe 1964, 157, fig 54.4.

**B16 AXE**
Northampton.
From Northampton Castle. Site: late Saxon to 17th century.
Poll, lug below eye, triangular blade with struck mark. L 209mm, cutting edge W 116mm.
Northampton Central Museum D194/1960.

**B17 AXE**
Burton-in-Lonsdale, North Yorkshire.
Later 13th–mid 14th century.
Plain eye, triangular blade. Residues of beech (*Fagus sylvatica*) handle. L 126mm, cutting edge W 72mm.
Moorhouse 1971a, 93, fig 3.2.

**B18 AXE**
East Hill Farm, Houghton Regis,
Bedfordshire.
*c*1000–1400.
Plain eye, triangular blade. L 163mm, cutting edge W 88mm (restored).
Luton Museum and Art Gallery, L/6/338/38.

**B19 AXE**
Deganwy Castle, Gwynedd.
Unstratified in bailey of castle of 1245–63, on site with earlier occupation. Found with blacksmith's equipment and iron slag.
Poll, lugs above and below eye, bearded blade. L 146mm, cutting edge W 75mm.
Excavated by W Greenhalgh. For site see Alcock 1967.

**B20 AXE**
Montgomery Castle, Powys.

Unstratified from site occupied 1223–1649.
Poll, lugs above and below eye, bearded blade. L 138mm, cutting edge W 76mm.
Knight 1994.

**B21 AXE**
Weoley Castle, Birmingham, West Midlands.
*c*1080 –1600.
Poll, lugs above and below eye which has wedge with adhering wood, bearded blade.
L 170mm, cutting edge W 109mm (restored).
Birmingham City Museum, WC362. For site see Oswald 1962.

**B22 AXE**
Waltham Abbey, Essex,
Late 14th–15th century.
Fragment including cutting edge of bearded axe. L 50mm, cutting edge W 150mm (restored).
Huggins 1972, 124.

**B23 AXE**
Wroughton Copse, Fyfield Down, Wiltshire.
Probably 12th century.
Shaped socket with extended lower lugs, shaped and chamfered bearded blade.
L 115mm, cutting edge W 95mm.
Excavated by P J Fowler.

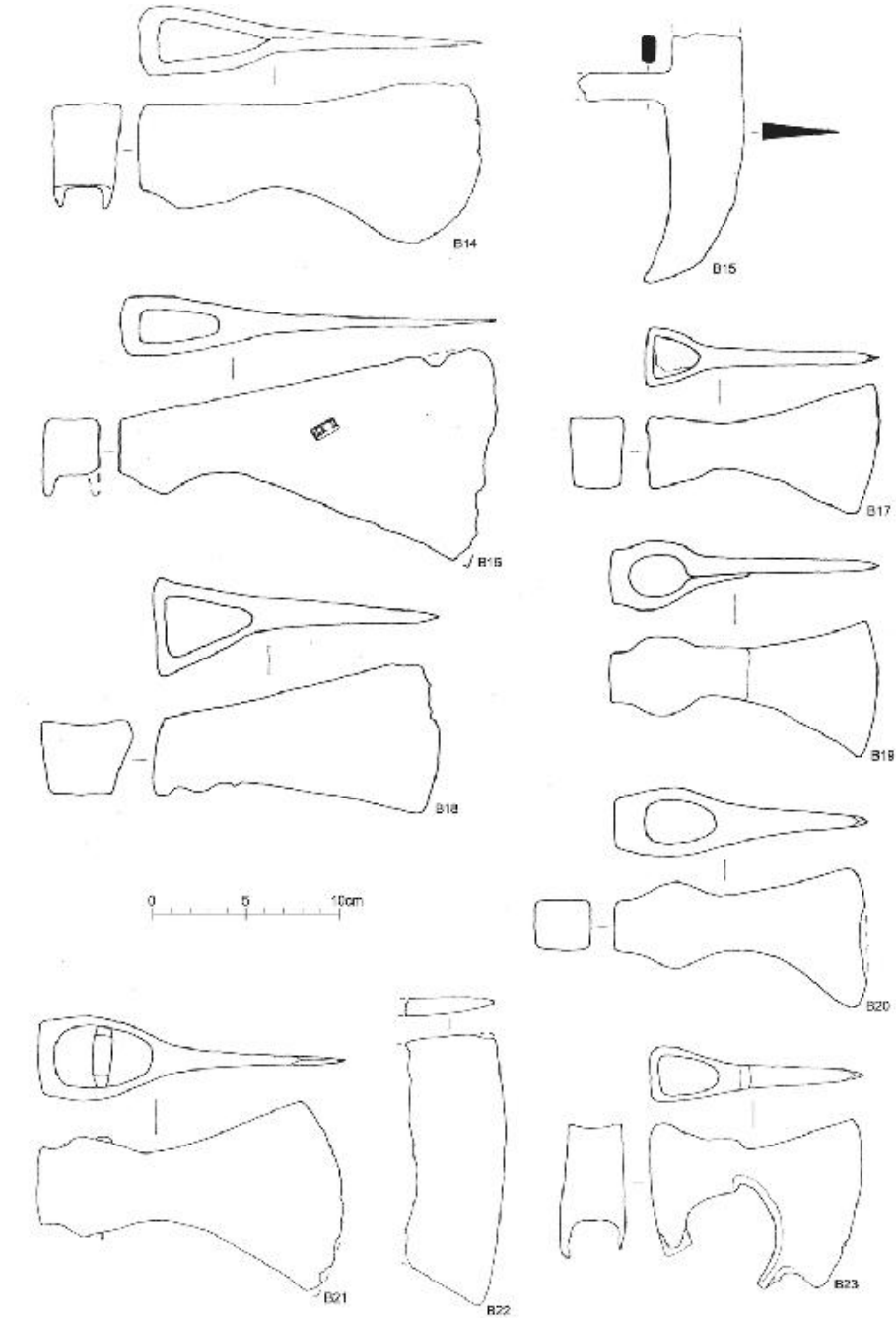



FIGURE 3.4
*Woodworking tools: Axes*

**B24 AXE**
Portsmouth, Hampshire.
1475–1500.

Strengthened butt, shaped socket, stamped mark on bearded blade. L 214mm, cutting edge W 143mm.
Fox and Barton 1986, fig 157.2.

**B25 AXE**
Crane Godrevy, Cornwall.
Unstratified from 15th to early 17th century site.
Poll, lugs below eye, bearded blade set to one side. L 167mm, cutting edge W 166mm.
Excavated by C Thomas.

**B26 AXE**
Winchester, Hampshire.
1250–1320.
Axe blade fragment, L 34mm, cutting edge W 69mm incomplete.
Goodall 1990-8, fig 58.392.

**B27 AXE**
Winchester, Hampshire.
14th century.
Axe blade fragment. Metallurgy: steel-cored blade. L 30mm, cutting edge W 78mm.
Goodall 1990-8, fig 58.393.

**B28 Ad ZE**
Thetford, Norfolk.
Late 11th century.
Flat blade broadening out to cutting edge with single-sided sharpening bevel. Blade set at an angle to, and broken across base of eye. L 141mm, cutting edge W 94mm.
Goodall 1984.

**B29 ADZE**
Goltho Manor, Lincolnshire.
*c*1100–*c*1150.
Poll, lugs above and below eye, curved blade widening slightly to cutting edge. L 208mm, cutting edge W 43mm.
Goodall 1987, fig 156.2.

**B30 ADZE**
Castle Acre Castle, Norfolk.
*c*1175–*c*1200.

Poll, lugs above and below eye, curved blade widening slightly to cutting edge. Eye blocked with iron-impregnated wood.
L 196mm, cutting edge W 45mm.
Goodall 1982, fig 38, no. 1.

**B31 ADZE**
Rochester, Kent.
Last quarter 12th century.
Plain eye, narrow, near flat, parallel-sided blade. L 219mm, cutting edge W 25mm approximately.
Harrison 1970, 112, fig 6.

**B32 SLICE**
Clough Castle, Co. Down.
*c*1225–50.
Damaged open socket, flat blade broadening out to damaged cutting edge bevelled on upper face only. L 174mm, blade W 59mm (restored).
Waterman 1954, 137, fig 11.4.

**B33 SLICE**
Winchester, Hampshire.
13th century.
Flanged socket with stub of wooden handle, flat blade broadening out to worn cutting edge bevelled on upper face only. L 120mm excluding handle, cutting edge W 43mm.
Goodall 1990-8, fig 59.394.

**B34 CHISEL**
Glastonbury Tor, Somerset.
12th–16th century.
Plain blade with double bevel cutting edge and whittle tong for insertion in handle.
L 266mm, cutting edge W 21mm.
Rahtz 1970, 53, fig 23.11.

**B35 CHISEL**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080–*c*1600.
Plain blade with double bevel cutting edge, whittle tong for handle. L 273mm, cutting edge W 17mm.
Birmingham City Museum, WC433. For site see Oswald 1962.

**B36 CHISEL**
Winchester, Hampshire.
Late 12th to mid 13th century.
Blade fragment with single bevel cutting edge. L 76mm, cutting edge W 8mm.
Goodall 1990-8, fig 59.395.

**B37 CHISEL**
Staines, Surrey.
1300–1500.
Blade fragment, single bevel cutting edge.
L 83mm, cutting edge W 18mm.
Excavated by K R Crouch.

**B38 CHISEL**
Badby, Northamptonshire.
15th–16th century or later.
Blade fragment, single bevel cutting ege.
L 73mm, cutting edge W 15mm.
Excavated by Mrs M Gray.

**B39 CHISEL**
Cheddar, Somerset.
Late 10th–12th century.
Rectangular stem, double bevel cutting edge(s). L 163mm, cutting edge W 14mm.
Goodall 1979d, 267, fig 90.6.

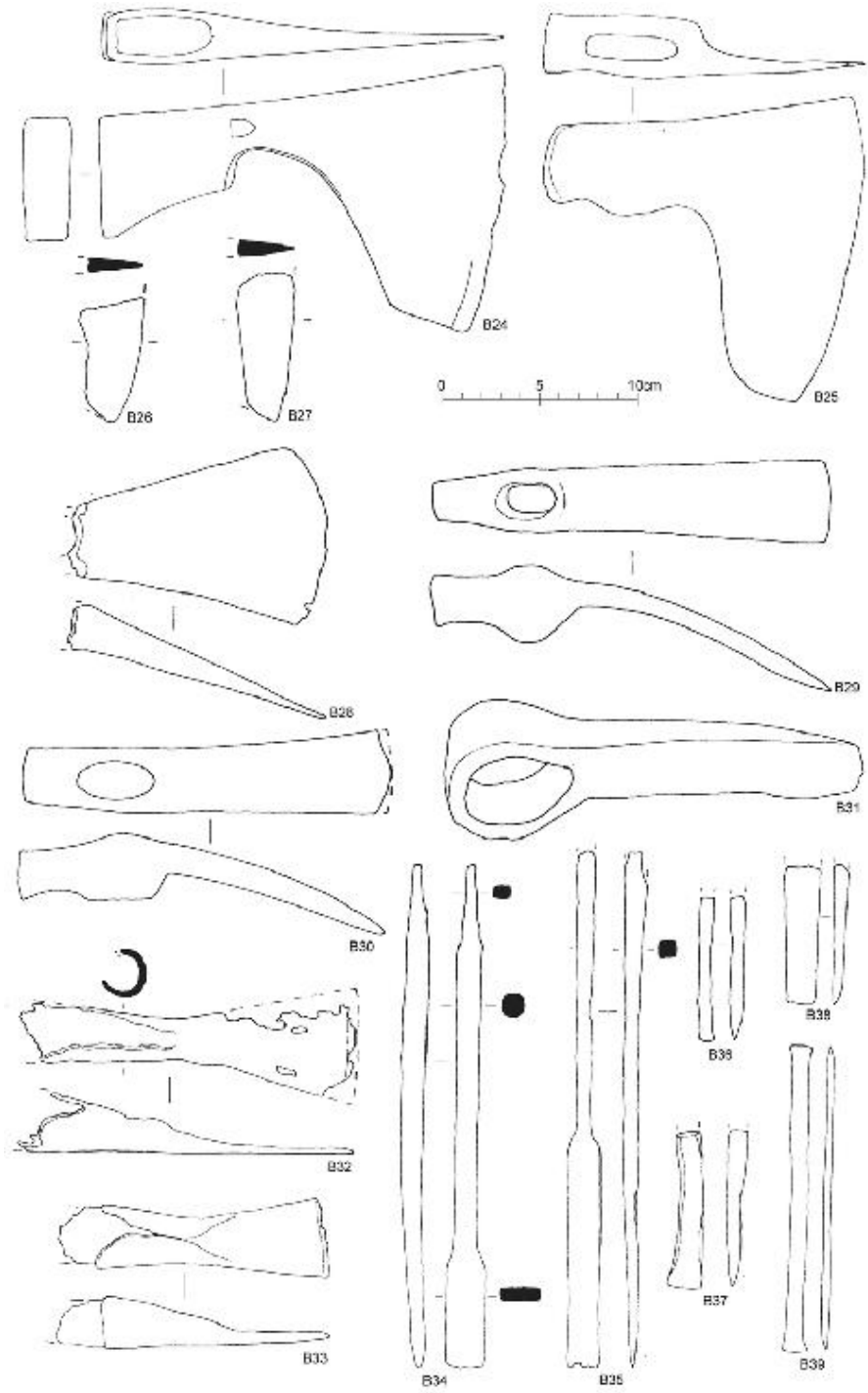



FIGURE 3.5

*Woodworking tools: Axes, adzes, slices, and chisels*

**B40 BIT**
Waltham Abbey, Essex.
12th/13th and 16th century.
Incomplete forging for bit comprising lanceolate terminal yet to be drawn down and shank awaiting blade. L 66mm. One of six.
Goodall 1973a, 170, fig 11.12.

**B41 SPOON BIT**
Goltho, Lincolnshire.
Late 14th–early 15th century. From smithy floor.
Broken lanceolate bit. L 77mm, blade W 7mm.
Goodall 1975a, 87, fig 41.92.

**B42 SPOON BIT**
Grenstein, Norfolk.
Late 14th or possibly early 15th century.
Lanceolate terminal. L 84mm, blade W 8mm.
Goodall 1980c, fig 77, no. 17.

**B43 SPOON BIT**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Lanceolate terminal. L 92mm, blade W 7mm.
Goodall 1980a, 513, fig 266.52.

**B44 SPOON BIT**
Waltham Abbey, Essex.
Lower topsoil and debris over building of *c*1200–*c*1540.
Incomplete lanceolate bit. L 93mm, blade W 7mm.
Huggins 1972, 124.

**B45 SPOON BIT**
London.
Around later 14th century.
Broken lanceolate bit. L 93mm, blade W 8mm.
Henig 1974, 191, fig 38.56.

**B46 SPOON BIT**
South Witham, Lincolnshire.
*c*1229 to *c*1308–13.
Lanceolate terminal. L 102mm, blade W 7mm.
Goodall 2002, fig 7.2, no. 24.

**B47 SPOON BIT**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Lanceolate terminal. L 107mm, blade W 11mm.
Goodall *et al* 1979, 118, fig 62.55.

**B48 SPOON BIT**
Grenstein, Norfolk.
Late 14th or possibly early 15th century.
Lanceolate terminal. L 117mm, blade W 7mm.
Goodall 1980c, fig 77, no. 16.

**B49 SPOON BIT** (?)
Pleshey Castle, Essex.
Early/mid 10th century to modern.
Lanceolate terminal, blade damaged but possibly near complete. L 117mm, blade W 8mm.
Goodall 1977c, 177, fig 38.16.

**B50 SPOON BIT**
Somerby, Lincolnshire.
15th–mid 16th century.
Lanceolate terminal. L 130mm, blade W 11mm.
Mynard 1969, 84, fig 13.IW88.

**B51 SPOON BIT**
St Catharine's Hill, Winchester, Hampshire.
Chapel: 12th century to 1538–40.
Lanceolate terminal, damaged blade.
L 131mm, blade W 4mm.
Hawkes *et al* 1930, 246, fig 29.13.

**B52 SPOON BIT**
South Witham, Lincolnshire.
*c*1220–late 13th century.
Lanceolate terminal. L 132mm, blade W 9mm.
Goodall 2002, fig 7.2, no. 23.

**B53 SPOON BIT**
Baginton Castle, Warwickshire.
Site: 14th–15th century.
Lanceolate terminal. L 137mm, blade W 12mm.

Herbert Art Gallery and Museum, Coventry.

**B54 SPOON BIT**
London.
Late 15th, early 16th century.
Lanceolate terminal,?incomplete. L 138mm, blade W 17mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**B55 SPOON BIT**
South Witham, Lincolnshire.
*c*1220–late 13th century.
Incomplete lanceolate terminal. L 153mm, blade W 16mm.
Goodall 2002, fig 7.2, no. 22.

**B56 SPOON BIT**
Thetford, Norfolk.
11th century.
Tip broken. L 157mm.
Goodall 1984.

**B57 SPOON BIT**
Lyveden, Northamptonshire.
1475–1500.
Lanceolate terminal. L 159mm, blade W 11mm.
Steane and Bryant 1975, 139, fig 52.252.

**B58 SPOON BIT**
Somerby, Lincolnshire.
15th–mid 16th century.
Incomplete lanceolate terminal. L 158mm, blade W 14mm.
Mynard 1969, 84, fig 13.IW87.

**B59 SPOON BIT**
Gloucester.
14th–15th century.
Incomplete lanceolate terminal, damaged blade. L 177mm, blade W 10mm.
Excavated by H Hurst.

**B60 SPOON BIT**
Glottenham, East Sussex.
Mid to late 12th century.
Lanceolate terminal. L 250mm, blade W 18mm.

Excavated by D Roberts.

**B61 SPOON BIT**
Brooklands, Weybridge, Surrey.
1200–1325.
Lanceolate tapering terminal. L 294mm, blade W 18mm.
Goodall 1977d, 73, fig 45.14.

**B62 SPOON BIT**
Cheddar, Somerset.
Early 13th century.
Lanceolate terminal. L 301mm, blade W 24mm.
Goodall 1979d, 267, fig 90.146.

**B63 SPOON BIT**
Clough Castle, Co. Down.
*c*1200–*c*1225.
Damaged lanceolate terminal. L 321mm, blade W 16mm.
Waterman 1954, 135–137, fig 11.2.

**B64 SPOON BIT**
Goltho Manor, Lincolnshire.
Topsoil, early to mid 12th century.
Broken lanceolate bit. L 314mm, blade W 27mm.
Goodall 1987, fig 156.4.

**B65 SPOON BIT**
Bramber Castle, West Sussex.
1075–1180.
Possibly lanceolate terminal. L 327mm, blade W 21mm.
Barton and Holden 1977, 64, fig 20.1.

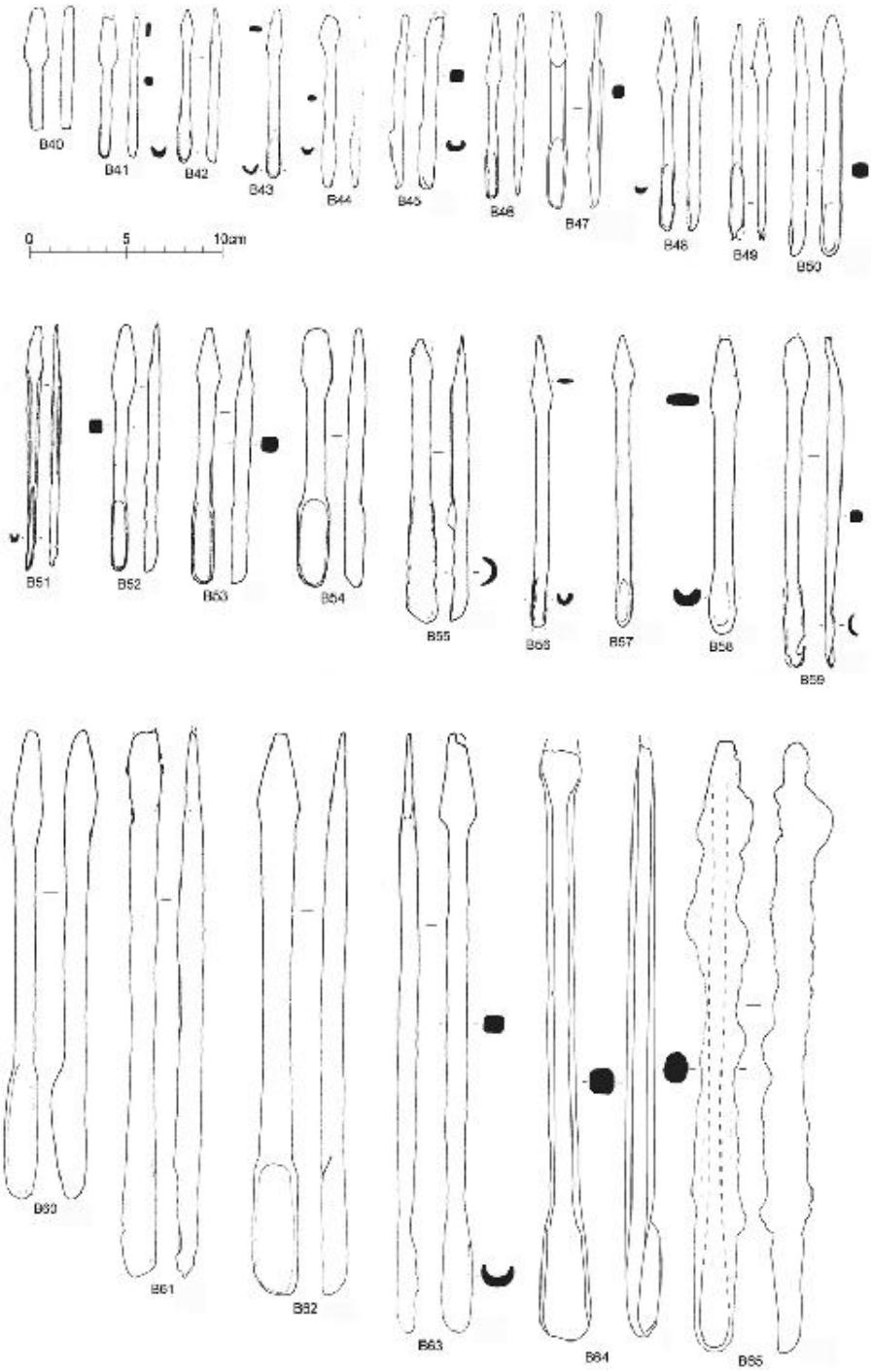



FIGURE 3.6
*Woodworking tools: Spoon bits*

**B66 SPOON BIT**

Castle Neroche, Somerset.
*c*1067–early 12th century.
Lanceolate terminal, damaged blade.
L 340mm, blade W 18mm.
Davison 1972, 41, fig 18.1.

**B67 SPOON BIT**
Mileham, Norfolk.
13th–14th century.
Lanceolate terminal. L 364mm, blade W 24mm.
Waterman 1945, 135.

**B68 SPOON BIT**
Clough Castle, Co. Down.
*c*1225–50.
Damaged lanceolate terminal, blade tip broken. L 415mm, blade W 27mm.
Waterman 1954, 135–137, fig 11.1.

**B69 SPOON BIT**
Waltham Abbey, Essex.
12th/13th and 16th century.
Blade and?incomplete shank. L 95mm, blade W 6mm.
Goodall 1973a, 170, fig 11.21.

**B70 SPOON BIT**
Alsted, Surrey.
*c*1270–1350.
Tapering terminal, tip lost. L 178mm, blade W 13mm.
Goodall 1976a, 56, fig 34.12.

**B71 SPOON BIT**
Wallingstones, Hereford and Worcester.
First half 12th century.
Tapering terminal. L 247mm, blade W 14mm.
Bridgewater 1970–72, 100, fig 16.31.

**B72 SPOON BIT**
Alsted, Surrey.
*c*1250–1405.
Shank broken, terminal lost. L 135mm, blade W 12mm.
Goodall 1976a, 56, fig 35.39.

**B73 SPOON BIT**
Waltham Abbey, Essex.
16th/17th century plus derived medieval material.
Blade and broken shank. L 158mm, blade W 20mm.
Goodall 1973a, 170, fig 11.22.

**B74 GOUGE BIT**
Pleshey Castle, Essex.
Early/mid 16th century to modern.
Lanceolate terminal, blade possibly near complete.
L 90mm, blade W 8mm.
Goodall 1977c, 177, fig 38.15.

**B75 GOUGE BIT**
Thelsford Priory, Warwickshire.
Site: 1200/1212–1536.
Incomplete lanceolate terminal, blade incomplete.
L 97mm, blade W 7mm.
Excavated by Mrs M Gray.

**B76 GOUGE BIT**
Northampton.
Middle Saxon–15th century.
Lanceolate terminal. L 104mm, blade W 7mm.
Goodall *et al* 1979, 273, fig 119.64.

**B77 GOUGE BIT**
Rayleigh Castle, Essex.
Site *c*1070–*c*1350.
Lanceolate terminal. L 114mm, blade W 6mm.
Prittlewell Priory Museum, Southend. For site see Helliwell and Macleod 1965.

**B78 GOUGE BIT**
Christchurch, Hampshire.
Possibly 13th century.
Incomplete lanceolate terminal. L 147mm, blade W 12mm.
Goodall 1983b, fig 34.48.

**B79 GOUGE BIT**
Writtle, Essex.
*c*1229–32.

Lanceolate terminal. L 179mm, blade W 11mm.
Rahtz 1969b, 87, fig 48.79.

**B80 GOUGE BIT**
Winchester, Hampshire.
1093–94.
Tapering terminal, slightly swollen at base.
Wood attached to tip. L 150mm overall, blade W 12mm.
Goodall 1990-8, fig 59.397.

**B81 GOUGE BIT**
Wharram Percy, North Yorkshire.
Mid 15th to early 16th century.
Shank broken. L 65mm, blade W 10mm.
Goodall 1979a, 123, fig 64.103.

**B82 GOUGE BIT**
Seacourt, Oxfordshire.
Mid to late 12th to late 14th century.
Shank broken. L 93mm, blade W 13mm.
Biddle 1961–62, 177, fig 30.3, scale 1:4, not 1:3.

**B83 TWIST BIT** (?)
Oxford.
*c*1325–*c*1400.
Tapering terminal. L 135mm, blade W 8mm.
Goodall 1977e, 142, fig 26.21.

**B84 TWIST BIT**
Montgomery Castle, Powys.
Unstratified; site 1223–1649.
Broken tapering terminal. L 140mm, blade W 7mm.
Excavated by J K K night.

**B85 TWIST BIT**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Distorted tapering terminal. L 130mm, blade W 4mm.
Goodall 1988, fig 73.1. For site see Borenius and Charlton 1936.

**B86 TWIST BIT**
London.

Late 13th–14th century.
Broken shank. L 72mm, blade W 5mm.
Henig 1974, 191, fig 38.57.

**B87 BIT**
Clough Castle, Co. Down.
*c*1200–*c*1225.
Broken lanceolate terminal and blade. L 90mm.
Waterman 1954, 141, fig 13.4.

**B88 BIT**
Walton, Buckinghamshire.
12th–13th century.
Lanceolate terminal. L 40mm.
Farley 1976, 267, fig 49.3.

**B89 BIT**
Pleshey Castle, Essex.
Mid 13th–early/mid 16th century.
Lanceolate terminal, blade broken. L 81mm, blade W 7mm.
Goodall 1977c, 177, fig 38.17.

**B90 BIT**
Bramber Castle, West Sussex.
13th century.
Lanceolate terminal broken shank. L 166m.
Barton and Holden 1977, 64, fig 19.9.

**B91 BIT**
Winchester, Hampshire.
14th century.
Lanceolate terminal, shank broken. L 82mm.
Goodall 1990-8, fig 59.398.

**B92 BIT**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080–*c*1600.
Shank broken. Lanceolate terminal retains part of iron-impregnated wooden handle.
L 85mm.
Birmingham City Museum, WC429A. For site see Oswald 1962.

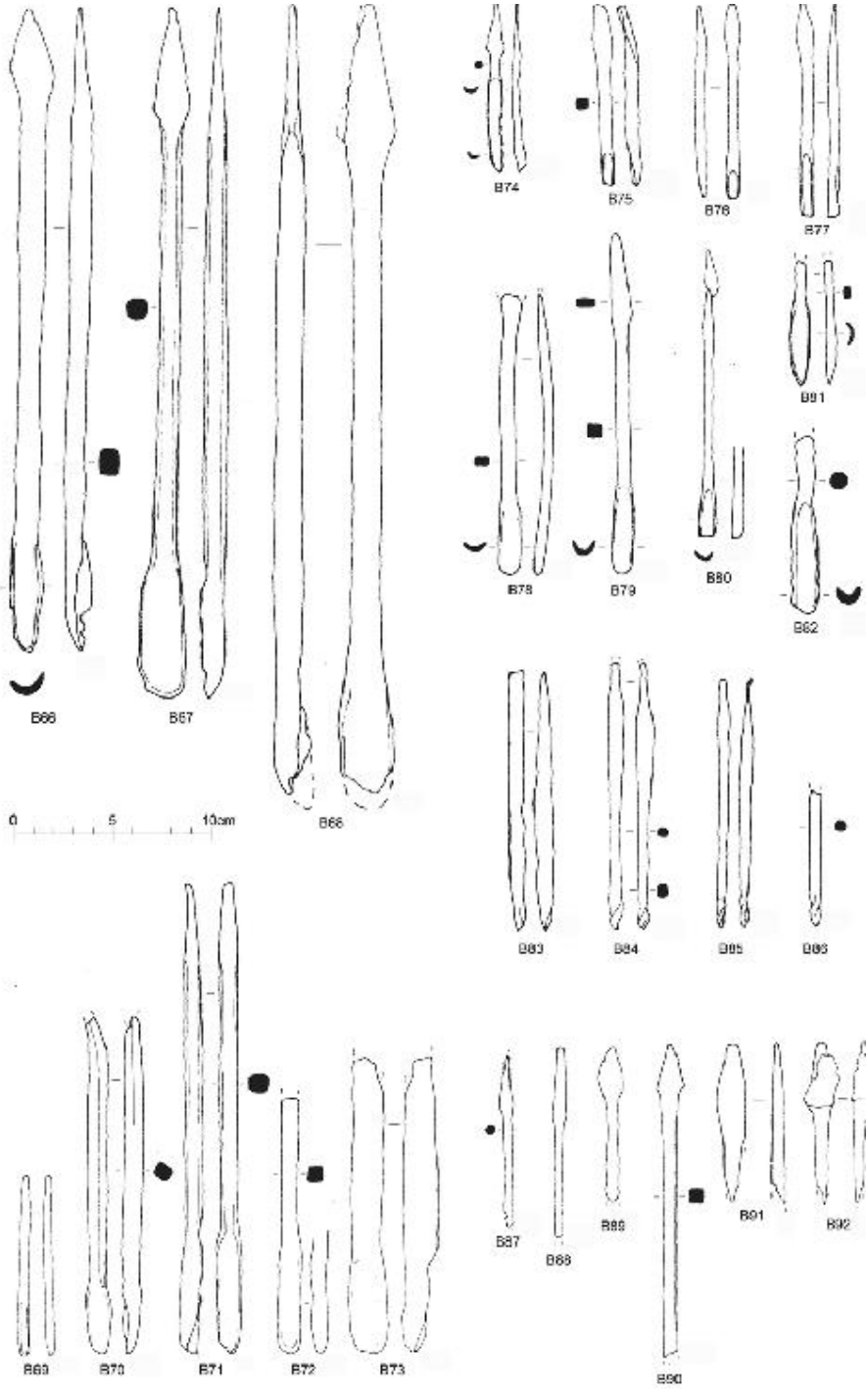



FIGURE 3.7

*Woodworking tools: Spoon bits, gouge bits, and twist bits*

**B93 SAW**

Pinsley, Southwick, Hampshire.
11th century.
Saw blade, straight back, slender cross section. Teeth damaged, approximately 8½ points per inch (25.5mm).
Portsmouth City Museums. From site of motte and bailey castle, in top of pit.

**B94 SAW**
Goltho, Lincolnshire.
Unstratified on croft with Late Saxon to late 14th- or early 15th-century occupation.
Saw blade, broken across hole at one end.
Teeth corroded, 3½ points per inch (25.5mm).
Goodall 1975a, 87, fig 41.93.

**B95 SAW**
Windcliff, Isle of Wight.
13th century.
Push-saw, blade incomplete, tang bent slightly out of plane of blade. Teeth set 4½ points per inch (25.5mm).
Dunning 1939, 135–137, fig 3; reproduced in Mercer 1968, fig 205.

**B96 DRAWKNIFE**
Hangleton, West Sussex.
Around early 14th century.
Curved blade, bevel ground on front edge, with tang for insertion in wooden handle.
Incomplete. L 55mm.
Holden 1963, 171, fig 37.9.

**B97 SPOKESHAVE IRON**
Waltham Abbey, Essex.
16th/17th century and derived medieval pottery.
Blade with distorted, shaped side arms in line with back of blade. W 137mm.
Goodall 1973a, 170, fig 11.23.

**B98 SPOKESHAVE IRON**
Wharram Percy, North Yorkshire.
Early 16th–20th century.
Blade with horizontal side arms. W 122mm.
Area 6, SF11245, Pd VII; Andrews and Milne 1979, 44, 54.

**B99 SPOKESHAVE IRON** (?)
Northolt Manor, Greater London.
1300–1350.
Flat curved blade with perforated projection to one side, broken, the other object in poor condition, but 'there may be a slight thinning from concave to convex edge'.
L 10mm.
Hurst 1961, 289, fig 76.18.

**B100 FLOAT**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Rectangular-sectioned rasp with coarse teeth and curved back. L 106mm.
Excavated by P J Fowler.

**B101 REAMER**
Lyveden, Northamptonshire.
Second quarter 13th century.
Tapering square shank. L 78mm.
Bryant and Steane 1971, 55, fig 13c2.

**B102 REAMER**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080–1600.
Tapering square shank. L 98mm.
Birmingham City Museum and Art Gallery, S32. For site see Oswald 1962.

**B103 REAMER**
Lyveden, Northamptonshire.
Second half 13th century.
Tapering square shank. L 108mm.
Bryant and Steane 1971, 55, fig 13c1.

**B104 REAMER**
West Hartburn, Durham.
13th–16th century.
Tang broken. L 76mm.
Still and Pallister 1964, 200, fig 5.39.

**B105 REAMER**
Goltho, Lincolnshire.
Late 14th to early 15th century smithy floor.

Tapering square shank. L 84mm.
Goodall 1975a, 87, fig 41.91.

**B106 REAMER**
Dyserth Castle, Clwyd.
Castle occupied 1241–63.
Tapering square shank. L 105mm.
Glenn 1915.

**B107 REAMER**
Alsted, Surrey.
*c*1250–1405.
Tapering square shank. L 131mm.
Goodall 1976a, 56, fig 35.41.

**B108 REAMER**
Bramber Castle, West Sussex.
14th century.
Tapering square shank. L 110mm.
Barton and Holden 1977, 64, fig 20.3.

**B109 REAMER**
Northampton.
*c*1410–20 to *c*1500.
Tapering lozenge section shank. L 124mm.
Goodall *et al* 1979, 273, fig 11g.62.

**B110 REAMER**
Northolt Manor, Greater London.
1300–1370.
Tapering square shank. L 132mm.
Excavated by J G Hurst.

**B111 REAMER**
Stonar, Kent.
*c*1275–1385.
Broken tang and tapering rectangular section shank. L 114mm.
Excavated by N Macpherson-Grant.

**B112 REAMER**
Hangleton, West Sussex.
13th or 14th century.

Complete. L 124mm.
Hurst and Hurst 1964, 137, fig 13.11.

**B113 CLAW HAMMER**
Winchester, Hampshire.
Late 11th–12th century.
Flat claw, slight swelling around eye, rectangular face. L 106mm.
Goodall 1990-8, fig 60.400.

**B114 CLAW HAMMER**
Alvechurch, Hereford and Worcester.
*c*1500.
Broken, gently curved claw, expansion round eye with three nails which formerly secured wooden handle, rounded face. L 152mm.
Oswald 1954, 9, pl 5.9.

**B115 CLAW HAMMER**
Hen Domen, Powys.
*c*1200.
Gently curved claw, expansion round socket with cross-shaped wedges to seams former wooden handle. L 150mm.
Higham and Rouillard 2000, no. 72.

**B116 CLAW HAMMER**
Rhuddlan, Clwyd.
Mid to late 13th century.
Flat claw, partly open socket, expansion round eye with nail to secure handle, rounded face. L 75mm.
Goodall 1994, fig 17.1, no. 4.

**B117 CLAW HAMMER**
Clough Castle, Co. Down.
*c*1250.
Flat broken claw, lugs below eye, neck, rectangular face. L 127mm.
Waterman 1954, 140, fig 12.9.

**B118 CLAW HAMMER**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Flat claw, lugs below eye, rectangular face.
L 109mm.
Goodall 2002, fig 7.2, no. 26.

**B119 CLAW HAMMER**

Guildford.

13th century.

Flat claw, side straps, expansion round eye, remains of wooden handle, rounded face.

L 113mm.

Excavated by F W Holling. From Tunsgate, Guildford.

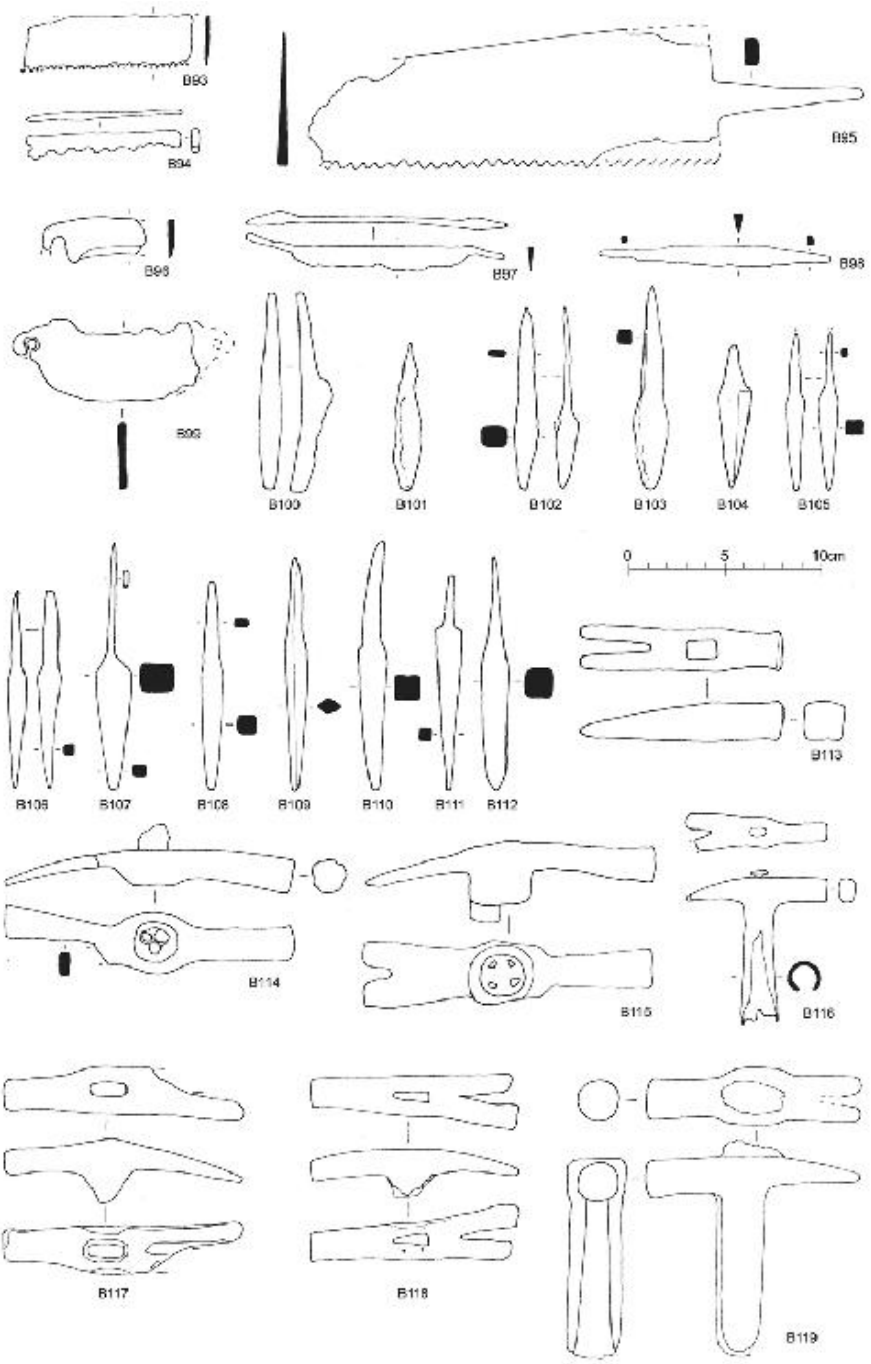



FIGURE 3.8

*Woodworking tools: Saws, drawknife, spokeshave irons, float, reamer, and claw hammers*

**B120 CLAW HAMMER**

South Witham, Lincolnshire.

Late 13th century to 1308–13.
Gently curved claw, broken straps, burred rounded face. L 111mm.
Goodall 2002, fig 7.2, no. 25.

**B121 CLAW HAMMER**
Hen Blas, Clwyd.
13th–14th century.
Flat claw, broken straps, rounded face. L 96mm.
Leach 1960, 23, fig 13.5.

**B122 CLAW HAMMER**
Stonar, Kent.
13th–14th century.
Flat claw, broken nailed side straps.
L 165mm.
Excavated by N Macpherson-Grant.

**B123 CLAW HAMMER**
Huish, Wiltshire.
14th–mid 15th century.
Flat claw, broken straps, slight expansion round eye, octagonal-sectioned neck, rounded face. L 65mm.
Shortt 1972, 120, fig 4.27.

**B124 CLAW HAMMER**
Northampton.
Later 15th century.
Curved claw, nailed straps, rectangular face.
L 126mm.
Goodall *et al* 1979, 272, fig 119.61.

**B125 CLAW HAMMER**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Flat claw, nailed straps, slight expansion round eye, rounded face. L 95mm.
Goodall 1980a, 513, fig 266.54.

**B126 CLAW HAMMER**
Rhuddlan, Clwyd.
(Later?) 13th century.
Single broken claw. L 50mm.
Goodall 1994, fig 17.1, no. 5.

**B127 CLAW**
Castle Acre Castle, Norfolk.
Pre-1085.
Broken, cranked shank with upturned claw.
L 163mm.
Goodall 1982, fig 38, no. 2.

**B128 CLAW**
London.
Late 15th to early 16th century.
Rectangular shank, broken tang. L 270mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**B129 PUNCH**
Northampton.
Late Saxon–15th century.
Circular-sectioned stem tapering to head and blunt point. L 84mm.
Goodall 1979b, 71, fig 17.8.

**B130 WEDGE**
Stretham, East Sussex.
Over building destroyed in 14th century or earlier.
L 217mm.
Excavated by A Barr-Hamilton.

**B131 WEDGE**
Winchester, Hampshire.
13th century.
Blade tip broken, head burred. L 178mm.
Goodall 1990-8, fig 60.409.

**B132 WEDGE**
Alsted, Surrey.
*c*1250–1405.
Head lost. L 143mm.
Goodall 1976a, 56, fig 35.37.

**B133 WEDGE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Slightly burred head. L 43mm.
Goodall 1977f, 47, fig iron 2.24.

**B134 WEDGE**
Hen Gaerwys, Clwyd.
*c*1450–1520.
Burred head. L 45mm.
Excavated by G B Leach.

**B135 WEDGE**
Winchester, Hampshire.
14th–?15th century.
Slightly burred head. L 46mm.
Goodall 1990-8, fig 60.406.

**B136 WEDGE**
Dyserth Castle, Clwyd.
Site occupied 1241–63.
L 48mm.
Glenn 1915.

**B137 WEDGE**
Burnham Church, Humberside.
c1300–1320.
L 48mm.
Excavated by G Coppack.

**B138 WEDGE**
Grenstein, Norfolk.
12th to late 14th or early 15th century.
Burred head. L 49mm.
Goodall 1980c, fig 77, no. 19.

**B139 WEDGE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Slightly burred head. L 56mm.
Goodall 1979a, 118–120, no. 57.

**B140 WEDGE**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.
Slightly burred head. L 56mm.
O'Neil 1944–45, 42, pl X.30.

**B141 WEDGE**
Hen Domen, Powys.
Site: *c*1070–14th century Slightly burred head. L 57mm Higham and Rouillard 2000, no. 76.

**B142 WEDGE**
London.
Late 15th to 16th century.
L 59mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**B143 WEDGE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Slightly burred head. L 63mm.
Goodall 1977f, 47, fig iron 2.23.

**B144 WEDGE**
Chingley, Kent.
Second half 13th century.
Slightly burred head. L 66mm.
Goodall 1975d, 60, fig 27.6.

**B145 WEDGE**
Chingley, Kent.
Second half 13th to mid 14th century.
Slightly burred head. L 65mm.
Goodall 1975d, 60, fig 27.7.

**B146 WEDGE** (not illustrated)
Winchester, Hampshire.
1090 –93.
L 68mm, W 13mm tapering to 10mm.
Goodall 1990-8, 277, no. 405.

**B147 WEDGE**
Winchester, Hampshire.
Mid 15th century.
Broken blade. L 74mm.
Goodall 1990-8, fig 60.407.

**B148 COMPASS**

Hampton Wafer, Hereford and Worcester.
11th to early 14th century.
Heavily corroded; hint of rivet at top and possible slot for interlinked arms. L 170mm.
Stanford 1967, 87, fig 7.14.

**B149 COMPASS**
Grenstein, Norfolk.
Late 14th or early 15th century.
Lugs intersect at top. L 94mm.
Goodall 1980c, fig 77, no. 18.

**B150 COMPASS**
Low Caythorpe, Humberside.
First half 14th century.
One of two lugs from pair of dividers.
L 60mm.
Coppack 1974, 41, fig 5.3.

**B151 COMPASS**
The Hamel, Oxford.
Mid 16th century.
Both arms broken. L 92mm.
Goodall 1980d, fig 29, no. 14.

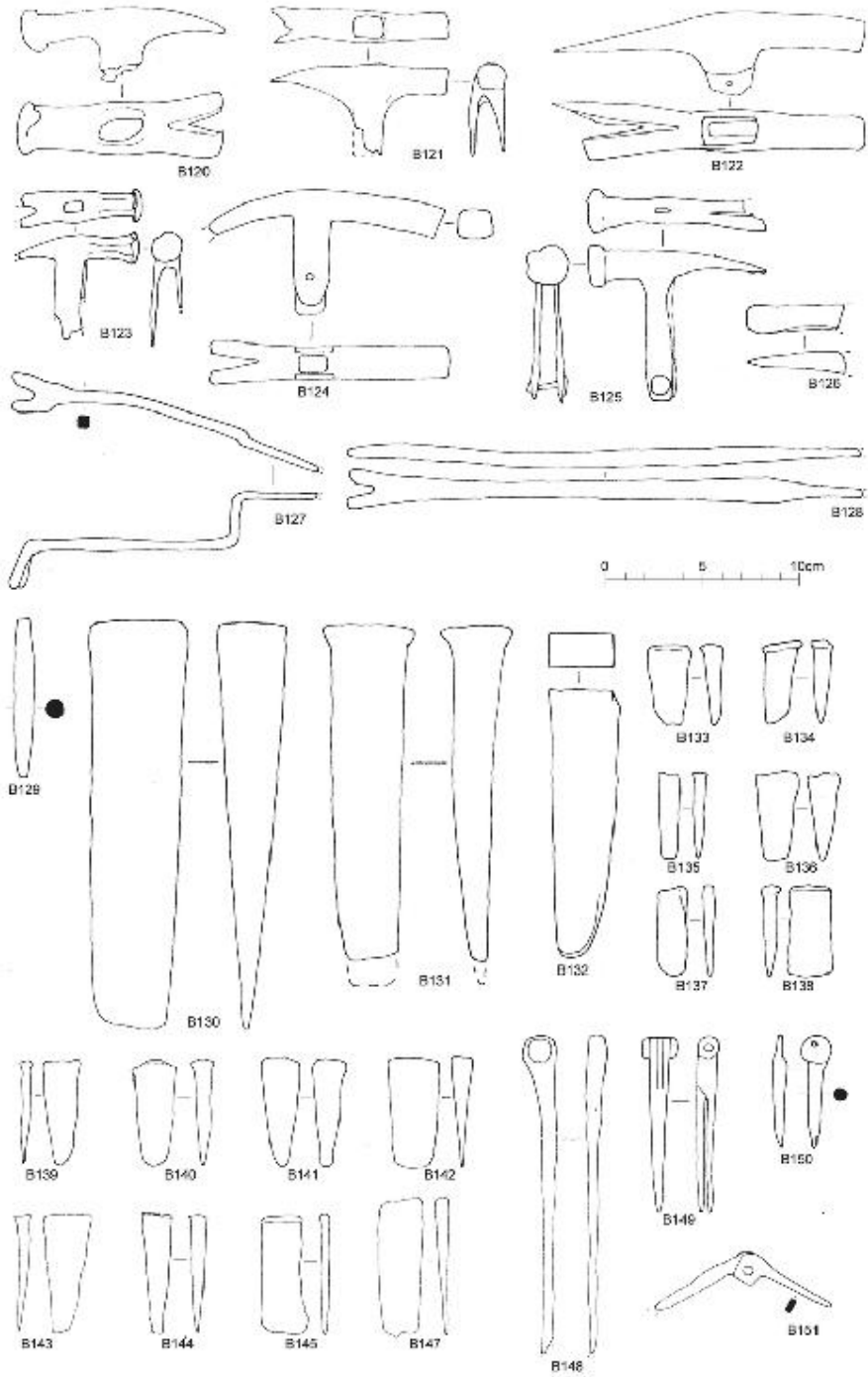



FIGURE 3.9

*Woodworking tools: Claw hammers, claws, punch, wedges, and dividers*

# 4
# Stoneworking and Plastering Tools

Churches, castles and manor houses were already being built of stone during the early medieval period, but it was not until the late 12th and 13th centuries that the timber walls of peasant houses in almost all stone-producing areas were replaced by walls built of stone (Beresford and Hurst 1971, 93–95). Comparatively few medieval mason's tools survive, but they are frequently mentioned in building accounts (Salzman 1967, 123–124, 330–340), and representations of building work most frequently depict work on stone buildings.

## 4.1 Quarrying and the Working of Stone

Medieval stone quarries such as those at Barnack, Northamptonshire (Beresford and St Joseph 1979, 254– 255), urvive as earthworks, but information about tools and the implications this has for techniques of extraction comes from documentary sources. Tools specifically mentioned in relation to quarrying stone (Salzman 1967, 331–332) are wedges, mauls, heavy hammer-axes, smaller broach axes, and crows, as well as spades, shovels, hoes, picks and pickaxes which were no doubt principally used to remove the overburden and waste.

The first stage in opening a quarry involved removing the overlying earth down to the top layer of stone which, although generally of inferior quality, and fissured and unsuitable for cutting into blocks, was useful as rubble. After this rag had been removed, the freestone proper was quarried with wedges, mauls and crows, and the blocks then reduced by further splitting and sawing before being broached and scappled to the required dimensions.

Some of the tools used in quarrying were also used in building work, particularly for demolition for which picks, pickaxes and mattocks were also used. Stone, including ornamental stonework such as plinths, string courses and voussoirs, was supplied ready worked and cut to measure directly from the quarry or was worked up in a lodge on the building site. Moulds and templates were used to guide the mason, who scribed their design onto the stone, and other setting out work was done with squares and compasses. The finished work was produced with axes, punches and chisels, the saws and

borers referred to in documents being used to cut up and pierce blocks of stone. Large blocks of stone were moved with lewises, and actual building construction involved using trowels and plumb-lines and levels.

Roofing required the quarrying of stone slates and their preparation with hammers and picks, and the mason might also produce and maintain millstones with mill-picks and bills.

## 4.2 Wedges

Wedges were used for quarrying stone for heavy work in actual building operations. At Scarborough in 1425, for instance, 'gavelocks [crows], mattokes, and wegges' were supplied not only for the quarry but for 'takyng downe of the Constable Toure … whilk was in point to fall' (Salzman 1967, 332). Wedges were also used for stone robbing, and two of large size from possible early 16th-century robbing were found *in situ* in the wall at Rest Park, North Yorkshire (Le Patourel 1973, 42, 95).

In quarrying, after clearing the overburden, the lines chosen for splitting the stone into blocks were marked and wedges driven home along them until it split as desired. Picks, pickaxes or hammer-axes are likely to have been used to cut the slots into which the wedges were placed before being driven in with a sledgehammer or maul. The large iron wedge **C1** with its large burred head may have been used alone to split stone. It weighs 2.422kg (5 lb 5½ oz) and may be similar to the wedges implied by an entry for 'wedges weighing 16 lb' used for getting stone for Magdalen College in 1474 (Salzman 1967, 331). Heavier wedges are implied by the '10 iron wegges, weighing 100 lb' mentioned at Stapleton in 1399.

Arkell (1947) describes two methods of splitting stone in recent use, the older using a jad or race, a double-edged axe, and wedges and slats, and the more recent plug and feathers. Both involved placing a central 'wedge' between iron side pieces in a prepared hole or slot and driving it into the stone. **C2–5** may have been used in the manner of modern plug and feathers, **C2** as the central wedge driven between the outer wedges **C3–5**. The smaller wedges **C3–5** are turned over at the top, as are feathers to prevent them slipping too far into the stone (Arkell 1947, 60, fig 9; Purcell 1967, 45, pls 15–16), and they have keeled or ridged sections which would have exerted considerable pressure on the stone as the central wedge was tapped down until the stone split. They are small, however, and it is possible that they had a structural use and are not tools. The curvature and burring of **C2** suggests that it is a mason's tool

subjected to heavier blows than if used as a blacksmith's cold chisel, but certainty is impossible. **C6–7** are not unlike the wedge and slat described by Arkell (1947, 121, fig 18), a slender wedge similar to **C6** being placed in an axe-cut slot between iron plates not unlike **C7** and driven into the stone.

Wedges **C8–9**, as their shape and find-spots indicate, were probably intended for use in actual building operations, although neither shows severe signs of wear. Both have a mason's mark struck on one face, and Salzman (1967, 127) records a recent mason stating that he only used his mason's or banker's mark on the hafts of his tools.

Wedges **C10–11** may have been used in quarrying stone or slate or in building work.

## 4.3 Hammers and Mauls

Hammers were used in the quarry and during building work, and iron mauls are frequently listed alongside wedges and crows in lists of tools supplied to quarries. These lists sometimes call them simply 'mauls' or 'great mauls', but some used for obtaining stone for Magdalen College in 1474 are described a '3 great mauls of iron and steel, weighing 70 lb', and at oxford in 1514 there is mention of 'a male of yryn' weighing 21 lb (Salzman 1967, 331–332). Heavy double-headed sledgehammers shown in modern use during the splitting of stone (Purcell 1967, pls 10a, 15b, 16a) are probably equivalent to the medieval maul, but no certain example is yet known unless some of the sledgehammers ascribed to blacksmiths are instead quarriers' tools. **A28** is certainly a blacksmith's tool since it was found with other metalworking equipment, but there must be more doubt about **A29–31**.

Sledgehammers were also used for breaking, rather than working, stone. At Warblington in 1518, 4d was 'payd for ye making of a scleyg for [to] brek ye grytt stonys', and the 1532 Westminster accounts note 'a great stone, poz. xvj lb qr'. There is also mention of '2 stonhamers called bateryngaxes' in 1444, '12 skabelinghambers for the roughleyers' in 1532, and 'setting hambers' (Salzman 1967, 335). Some of the hammers described above, **A32–36**, may have been used by masons.

## 4.4 Crows

Crows and gavelocks, the latter large crows, appear in lists of tools used in quarries and for building operations (Salzman 1967, 331–332). During the building of Vale Royal Abbey in 1278, 3s was paid 'pro ij cornailis [crows] ferries pro lapibus levandis de quarrera', and in 1334 at k naresborough Castle there is mention of 'an iron gavelock for breaking stones in the quarry'. Tools used in getting stone for Magdalen College in 1474 included 'a tool called a crowe or iron, weighing 72 lb', and at o xford in 1514 'a crawe of yrne' weighing 91 lb is mentioned. Crows were not reserved for quarry use, however, for at Scarborough in 1425 'gavelockes, mattokes, and wegges' were supplied for the quarry and for taking down the Constable Tower. At Winchester Castle in 1222 payment was made 'for 2 crows to break the walls and 3 wedges' (Colvin 1971, 130–131).

No crows survive from archaeological contexts, but some appreciation of their use in levering stone from the bed can be gained from photographs of them in use at Weldon quarry (Purcell 1967, 36, pls 10 and 11). The size of crow in use there would clearly have been of little use in building work, but it explains the considerable size implied by the documentary references.

## 4.5 Picks, Pickaxes and Mattocks

Medieval documents include references to picks, pickaxes and mattocks in combination which imply that they were used in various stages of quarrying stone as well as in building work. Picks and pickaxes must have been used in the removal of the overburden and ragstone prior to the start of quarrying, as well as for digging foundations and breaking down walls. Such work must have been harsh, and it is not surprising that picks are sometimes mentioned in documents because they required repair. At Durham in 1533, 2d was paid 'for sharpening the pykke' at the quarry, and at Woodstock in 1256 there is a charge 'for sharpening and mending picas' and crawes' (Salzman 1967, 332–333). **C12–14** are single-bladed picks, all retaining traces of their handles. That of **C13** has been identified as birch, and that of **C14** is secured in the eye by an iron wedge. These picks are suitable for general purpose use, and are occasionally shown in illuminations being wielded by one of the besieged garrison evidently as a weapon and not a tool.

Picks are first mentioned in documents as 'picas', or more usually as 'picois' or 'pykoys', but in time the term becomes corrupted to the modern form 'pickaxe'. At Woodstock in 1494 a smith received payment 'for stelyng of ij pykax…' and at Westminster in 1532 there is mention of 24 'pykaxis' weighing

1½ cwt 10 lb, and 'iij pyckaxis with hamber heedis provided for brekyng downe of the greate Toure in the palesse' (Salzman 1967, 330, 333). The qualification 'with hamber heedis' added to the term pickaxe in this last document may be no more than pedantry, but it certainly refers to such medieval pickaxes as **C15–17**. These all retain their hammer arms complete, but the pick arm of **C16** is broken. **C15** has a wedge which formerly secured the handle in the eye, while **C16–17** have lugs descending below the eye to increase the security of the handle. No pickaxe resembling the Roman dolabra (Manning 1976, 27–28, figs 17, 76, 18.77) is known, and it is possible that the surviving pickaxes represent the only medieval type.

Mattocks, tools with a pick arm combined with an adze-like blade, are mentioned in documents although less frequently than picks. The adze-like blade was ideal both for breaking up soil and loose rock and for taking down masonry, in the latter case breaking up mortar and levering apart blocks of stone. During the pulling down of Abingdon Abbey in 1539 there was 'paied to Richard Smythe for the making of viij Ies to viij mattokes at iiijd the I – ijs vii d' (Salzman 1967, 333). Such work required a good edge, and in 1538 a smith was paid 'for new transposyng of x mattocks wt stelyng of the same' in connection with the demolition of Chertsey Abbey (Salzman 1967, 331). No mattock is yet known from a medieval context.

## 4.6 Hammer-Axes

After extraction, blocks of stone were sometimes further split to create more manageable pieces, and the next process involved reducing or roughly dressing the stone and removing waste before fine tooling was undertaken. In recent times the rough surface was reduced with sledgehammers and picks (Arkell 1947, 115; Purcell 1967, 46, 88, pl 45a), and medieval documents confirm that similar tools were in use before.

Sledgehammers have been noted above, but other tools listed are the 'pulyng ax' or 'polax' and the 'kevel', both forms of heavy hammer-axe, and the smaller 'brocheax' (Salzman 1967, 331). These hammer-axes must have been for the preliminary reducing and scappling of stone blocks and for roughly shaping the blocks during final working either in the quarry or the mason's lodge. **C18–19** are hammer-axes, both with expansions around their eyes but neither with lugs. **C18** retains part of an ash handle, of interest because ash is frequently mentioned in documents as the wood used for handles (Salzman 1967, 251, 335). **C19** has an iron nail and wedge through its

eye to secure the handle.

## 4.7 Axes

The axe was used by the mason for surface dressing, as masonry testifies and many illustrations show, including a drawing of about 1250 by Matthew Paris (Salzman 1967, pl 4; Harvey 1975a, pl 18). Documents refer to these axes as 'hachiis' or as stoneaxes (Salzman 1967, 334–335), and they were used either to give the final finish to a stone, as the diagonal and vertical tooling of Romanesque architecture indicates (Clapham 1934, 116), or as a preliminary to final dressing with claw chisels. The axes used had two vertical cutting edges, as has **C20** with its two equally sized blades and slender lugs below the eye.

## 4.8 Punches

Arkell (1947, 123–124, figs 19–20) illustrates a range of modern tools, but no medieval equivalent of the pitching tool used to remove the rough on the stone prior to the use of the punch is known.

The mason's punch was used for rough dressing stone during its final working into shape, and the range in size of the surviving punches **C21–27** today, also known as points, reflects the scale of work on which they were used. The burred heads of such punches as **C24** and **C26** imply their use with hammers, but mallets must have been used with some of the others.

## 4.9 Chisels

The mason's chisel, used for dressing, shaping and carving stone, differs from the carpenter's chisel in its stoutness and in having a striking face and stem in one with the blade. The blade itself is often flared and bevelled on both faces.

Chisels **C28–38**, all mason's chisels, range widely in size but less so in blade form. All have expanded heads, few with marked burring, and it is possible that all were struck with wooden mallets which give a smoother and more controlled operation. If modern practice is a guide (J Duffield pers comm), the narrow-bladed chisel **C28** could have been used on the edge of a block of stone

for working down almost to the marked line. The central area of the stone, hitherto only worked by the pitching tool and punch, would probably have been worked with a claw chisel or its equivalent before a smooth finish was produced with a chisel of the type represented by **C29-equ**ivalent is yet known of the modern bolster with a blade of 50–130mm wide and used to produce a fine finish, nor of the sheet iron drag used to remove chisel marks on the soft stone. Salzman (1967, 334) notes that no implement named in the building accounts can be identified as the drag, and suggests that in the medieval period the blade of the mason's hammer was used with a drawing motion to perform the same function.

Carving mouldings and decorative details required specialised tools, and **C35–37** may have been used to carve grooves. They are slender and have narrow blades, and could be the equivalent of the modern quirking tool (Arkell 1947, 123, fig 20.6). They may also have been used for more detailed carving, a possible use for the flared, single-edged bevelled blade **C38**.

## 4.10 Saws

Stone was split with wedges and cut with saws. Documents imply at least two sizes of saw, since there are references to 'a saw for sawing stone, 4 ft long' at Westminster in 1329, and a further reference in 1532 to 'stone sawis for masons' bought at 8d (Salzman 1967, 336). **C39**, an incomplete saw with a long narrow blade, was probably used for cutting stone.

## 4.11 Stone Augers

Stone was pierced with borers or augers, but no surviving example is known. Documents refer to 'a great borer, 3½ ft long' at Westminster in 1329, to the purchase of 'an instrument called a stoon naugor' at Salisbury in 1479, and to purchases of 'ston persers for the masons' at Hampton Court in 1533 (Salzman 1967, 336). An auger might have been used in quarrying for drilling holes for the insertion of wedges, as was practiced before the advent of pneumatic drills (Purcell 1967, 46).

## 4.12 Setting out Tools

Quarrying, working stone and building all required some degree of setting out. The lines along which stone had to be split and subsequently reduced required marking, and the carving of ornamental stonework such as plinths, strings, tracery and hood moulds involved the use of squares and templates.

Squares were generally made of wood, and are usually depicted as such in illuminated manuscripts, but there are documentary references to squares made up of iron which are not yet supported by any actual example. There were '2 irons made in the shape of sqwiers' in the lodge at Westminster in 1387, and in the lodge at Portchester in 1430 '3 squaryngirnes' (Salzman 1967, 339). The 'moldes' or templates which were used as a guide for masons had to have the required shape transferred to the stone by a scriber such as **C40**, found in a masons' working area. No doubt any object with a pointed tip might have been used.

Dividers or compasses are tools common to masons and carpenters, and those described above (**B148–151**) are all probably small enough to be carpenters' tools. Masons used them for setting out mouldings and arranging arches and window tracery.

Plumb-levels and plumb-lines were used to maintain horizontal joints and vertical faces in masonry during construction, and representations show both using a plumb or lead weight as a guide (Harvey 1975a, pls 14 and 18). In 1444 '19 plomettes of lead' are mentioned at Shene (Salzman 1967, 339), and several plumb-bobs survive, amongst them **C41** with an iron staple, and **C42** with rust encrustation implying a lost staple.

## 4.13 Hoisting Equipment

The movement of large blocks of stone, including keystones and bosses from vaults, was often done by means of a lewis. Salzman (1967, 322–333) identifies two types, one an arrangement of three iron wedges side by side on a bar, the other and earlier two crescent-shaped irons hung from a common ring. **C43** is probably the centre wedge from one of the multiple lewises, its centre bar now appearing to be integral. It was used with two outer wedges which were forged with an outer bevel, and all three were inserted in a specially cut hole and hoisted with a loop and hook. The crescent-shaped irons hung from a common ring with their convexities facing inwards and their lower ends inserted in holes cut diagonally in the stone.

Representations often show large grips or scissors bolted together and acting as giant pincers (Harvey 1975a, pl 22), and Salzman (1967, 323) identifies these with the 'robenettes' of documents. No medieval example is known.

Hooks are often shown lifting materials via hoists or cranes (Harvey 1975a, pls 18–19), and some discussed below under 'Household ironwork' (Chapter 11) may be from building works.

## 4.14 Trowels

Masons, bricklayers and plasterers made constant use of trowels, which therefore occur frequently in documents, although references are normally restricted to statements such as 'ij trowell in the logge' at Scarborough in 1425, payment 'for 15 trowellis at 6d each' at Westminster in 1532, or payment at Cambridge Castle in 1295 'for working 3 pieces of iron to make 12 truell for the masons' (Salzman 1967, 335–336).

Entries can be more detailed, as in the spending of 3d on 'a trulle or iron for smoothing the walls' at Southampton in 1301 (Salzman 1967, 336).

All the medieval trowels (**C44–49**) have cranked tangs which were originally set in a wooden handle, and most have the large blades needed for spreading mortar, cement and plaster. **C44** is roughly triangular in shape, as **C45** may have been, but **C46–48** have diamond-shaped blades. **C48** is smaller than the others and may have been used for pointing or for plastering in small or restricted areas. **C49** has an oval blade whose rounded edges are probably more appropriate for a plasterer than a mason or bricklayer.

## 4.15 Slaters' Tools

Medieval roofs were thatched, tiled or covered with stone slates, and stone for slates is likely to have been quarried or mined with tools similar to those employed in quarrying stone. Tools in recent use are described by Aston (1974, 41–42, fig 17) and Purcell (1967, 60, pls 27b and 28).

Splitting slates from large blocks of stone by frost action may be a post-medieval technique (Arkell 1947, 132), in which case the medieval slatter is likely to have used a hammer with two cutting edges such as **C50** for this purpose. This type of hammer is still used for removing waste from blocks and for splitting them, as well as for trimming the edges of the slate to their final

shape (Arkell 1947, 133–135, fig 22; Purcell 1967, 60–61, pl 30; Aston 1974, 50, fig 27.212, 386, 4802). No example of the heavier hammer combining hammer head and cutting edge, and used recently for trimming slates to shape, is known (Arkell 1974, 148, fig 25; Purcell 1967, 61, pl 31; Aston 1974, 50, fig 28).

Two types of pick used to make the hole in a slate are known, one with an eye for a handle, the other used a separate, independent wooden handle. **C51**, too small to have been used in quarrying, has two pick blades and a lugged eye for a wooden handle. Picks **C52–62** taper more or less equally towards each end and in use were inserted into wooden handles with tapering holes cut close to the top (Arkell 1947, 133–135, 148, figs 22, 25; Purcell 1967, 61, pl 31; Aston 1974, 50, fig 27.2145, 2149, 4796–99, fig 29). The pick was turned round when one head became blunt and the fresh end was used, and when this in turn became blunt a new pick was inserted. Slatters, like millstone dressers, would have had a supply of picks which were sharpened and reworked by the smith as required. Some of the larger picks, such as **C62**, may in fact be mill-picks.

The hole in a slate was probably made with numerous light taps of the pick, the blows being directed towards the centre and from one side of the slate only (Arkell 1947, 135). Salzman (1967, 234) quotes a number of payments for piercing slates, including that at Woodstock in 1285 'pro j perforatore sclate per ij dies', but also suggests that a drill was sometimes used. In 1313 Simon de Norton, tiler, was paid 1d 'for a hide bought whereof to make a spyndelthoung for boring slates'.

## 4.16 Millstone Dressing Tools

Mill-picks and mill-bills used to level and dress millstones are hafted in the manner of slatters' picks in wooden handles called thrifts (Freese 1957, 102–107, pl 28b, c). Mill-pick **C63**, found in a mill-sluice, is similar to a slatter's pick but larger, and was used for the preliminary levelling of millstones and sometimes for chipping away unworn high spots on stones in use. The mill-bill, with wide cutting edges at each end rather like those of the slatter's hammer, levelled the surface and dressed the furrows of the millstone. These tools were rapidly blunted, and a dozen mill-bills might be blunted in dressing the furrows and have to be reground and eventually reworked if the steeled edge was worn away.

# 4.17 Stelling and Repairing Tools

Medieval tools, particularly those of masons, were often made with a steel cutting or working edge, but despite this they lost their edges and there are many documentary references to the purchase of steel for shutting or welding onto the edges of tools. Salzman (1967, 288) records '6 sheaves of steel for putting on the iron tools of the masons' at Ely in 1323, and the use of 94 lb of Spanish steel at Portchester in 1397 'for the hardening of the axes and other tools of the masons'. In 1538, when Chertsey Abbey was being pulled down, the smith was paid 6d 'for new shuttyng poyntyng and stelyng of vj crowes of irne' and 10d 'for new transposing of x mattocks w$^{t}$ stelyng of the same'.

In addition to re-steeling tools, blacksmiths also had to rework or 'batter' tools when they were worn by use. At Sheppey in 1365 the smith was paid 'for battering of 1,594 masons' axes, at ¼d each, and for battering 5,720 masons' tools at 1d for 20', and in 1348 at Westminster there are payments 'to Katherine the smith-wife for steeling and battering of the masons' tools' (Salzman 1967, 336–337).

**C1 WEDGE**
Castell-y-Bere, Gwynedd.
Site: *c*1221–1295.
Burred head. Weight 2.422 kg (5 lb 5½ oz).
L 164mm.
Butler 1974, 97, fig 8.12.

**C2 WEDGE**
Seacourt, Oxfordshire.
Mid to late 12th to late 14th century.
Burred head, curved distorted shank.
L 138mm.
Biddle 1961–62, 177, fig 30.5, scale 1:4, not 1:3.

**C3 wedge**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Down-turned head set to one side, ridge shank. L 82mm.
Area 6, SF12137, Pd VI; Andrews and Milne 1979.

**C4 wedge**
Bayham Abbey, East Sussex.
Probably derived from late 15th to early 16th century material.

Down-turned head set to one side. L 74mm.
Goodall 1983a, fig 45.15.

**C5 wedge**
Wharram Percy, North Yorkshire.
Early 10th to 20th century.
Head set to one side, ridged shank. L 65mm.
Goodall 1979a, 118–120, fig 62.58.

**C6 wedge**
Copt Hay, Tetsworth, Oxfordshire.
Late 12th, 13th century.
Broken rectangular stem, slightly flaring blade. L 110mm.
Robinson 1973, 101, fig 23.9.

**C7 wedge**
Winchester, Hampshire.
15th–16th century.
Broken blade, slightly burred head.
L 82mm.
Goodall 1990-8, fig 60.408.

**C8 wedge**
Castle Acre Priory, Norfolk.
From water channel under reredorter.
Reredorter built in mid 12th century; site late 11th century to 1537 with later use of some buildings.
Tapering rectangular section, slightly burred head, mason's mark on one face.
Weight 2.112 kg (4 lb 10½ oz), L 202mm.
d AMHB Collection, London. For site see Raby and Reynolds 1952.

**C9 WEDGE**
Castle Acre Priory, Norfolk.
From water channel under reredorter.
Reredorter built in mid 12th century; site late 11th century to 1537 with later use of some buildings.
Tapering rectangular section with mason's mark on one face. Weight 1.913 kg (4 lb 3½ oz), L 219mm.
d AMHB Collection, London. For site see Raby and Reynolds 1952.

**C10 WEDGE**

Clough Castle, Co. Down.
*c*1250 to early 14th century.
Burred head. L 64mm.
Waterman 1954, 137, fig 11.5.

**C11 WEDGE**
Burton-in-Lonsdale, North Yorkshire.
Later 13th century–mid 14th century.
L 90mm.
Moorhouse 1971a, 95, fig 3.20.

**C12 PICK**
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Single-ended pick with remains of wooden handle. L 231mm.
Casey 1931, 252, pl XXV.7.

**C13 PICK**
Weoley Castle, Birmingham, West Midlands.
*c*1200–1230.
Single-ended pick, socket formed by wrapping iron round against left face of blade which has traces of welds from initial forging. Found with birch handle, not preserved. L 235mm.
Oswald 1962–63, 130, fig 51.5.

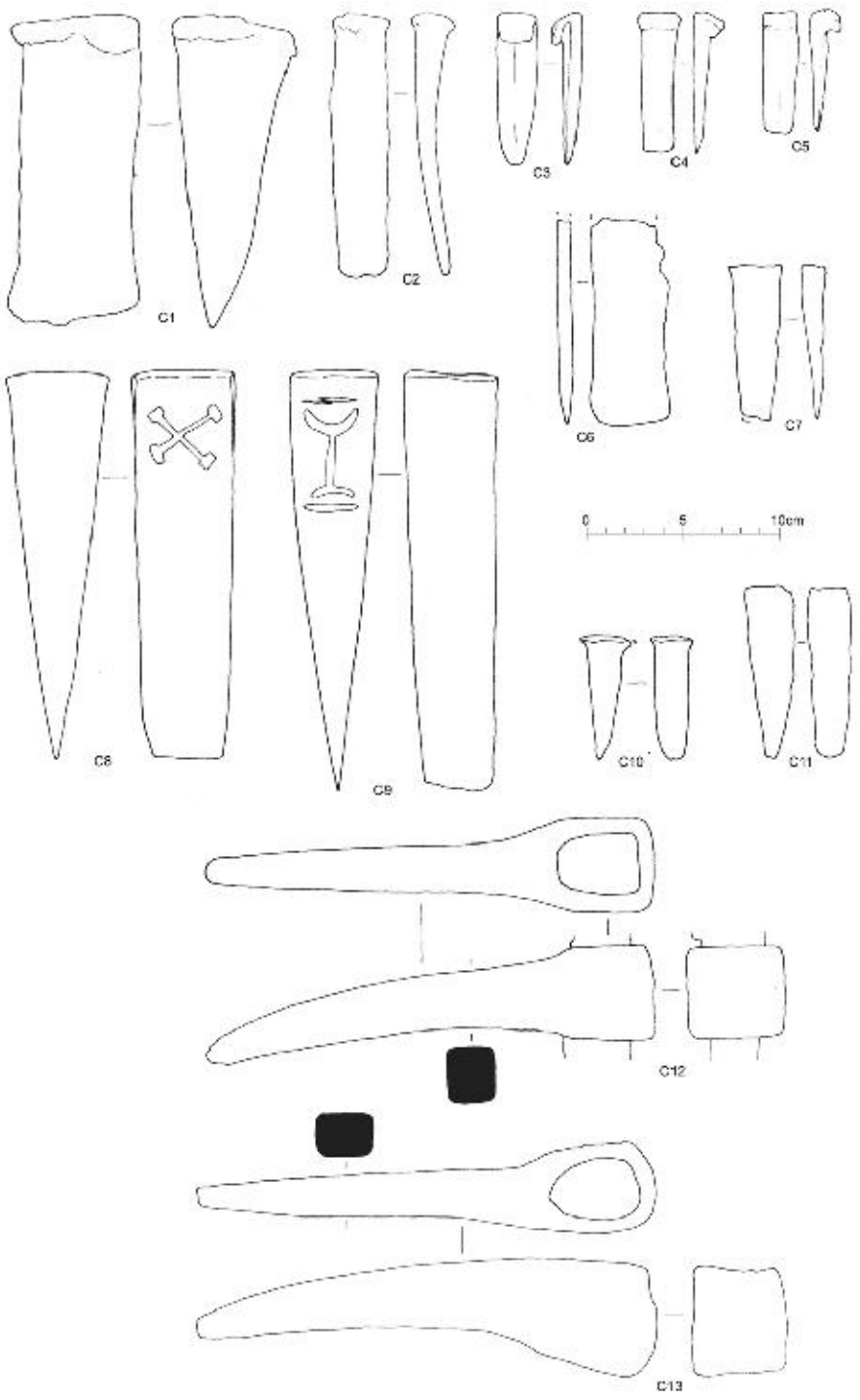



FIGURE 4.1
*Stoneworking tools: Wedges and pickaxes*

**C14 PICK**

Lydford Castle, Devon.

*c*1250–1300.

Single-ended pick with part of wooden handle of oval section secured in eye by iron wedge. L 457mm.

Goodall 1980b, fig 18.2.

**C15 PICKAXE**

Llanstephan Castle, Dyfed.

Site: 12th to 15th century.

Rectangular-sectioned arms with expansion round eye which retains wedge which formerly secured handle. L 287mm.

Excavated by Mrs L Murray-Thriepland and G Guilbert. For site see King 1963.

**C16 PICKAXE**

Castle Acre Priory, Norfolk.

From narrow sewer drain under reredorter.

Reredorter built in mid 12th century; site late 11th century to 1537 with later use of some buildings.

Pick arm broken, swelling round eye. Lugs below eye. L 305mm.

DAMHB Collection, London. For site see Raby and Reynolds 1952.

**C17 PICKAXE**

Coventry, Warwickshire.

From tower of city wall built 1404, taken down 1461.

Lugs below eye. L 334mm.

Herbert Art Gallery and Museums, Coventry. Shelton Collection.

**C18 HAMMER-AXE**

White Castle, Gwent.

Site: 12th century onwards, roofless and derelict by 16th century.

Axe blade with vertical cutting edge, hammer head burred. expansion around eye which retained fossilized remains of ash (*Fraxinus*) handle. L 249mm.

DAMHB Collection, London. For site see Radford 1962.

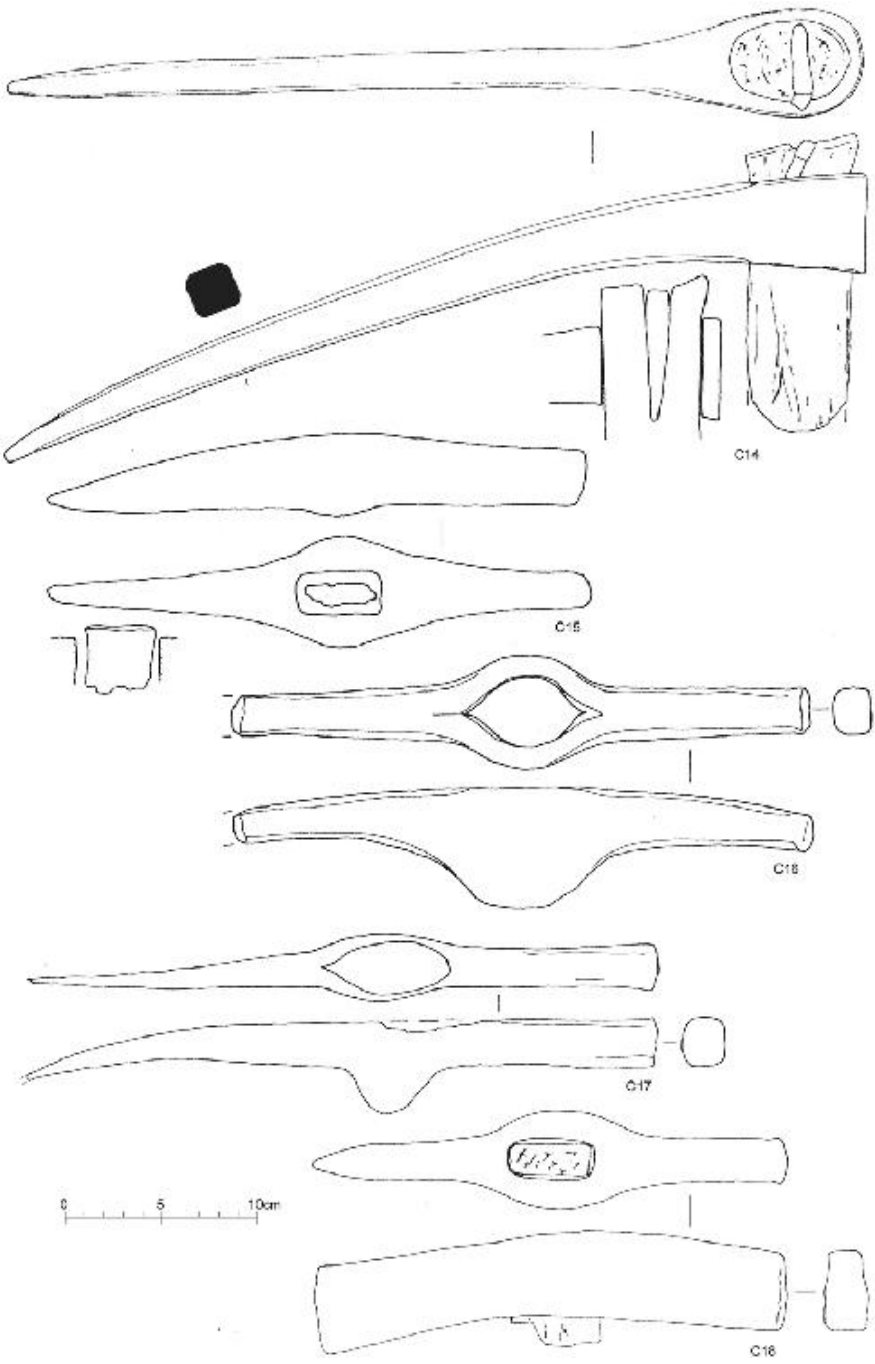



FIGURE 4.2
*Stoneworking tools: Pickaxes and hammer-axe*

**C19 HAMMMER-AXE**
Fountains Abbey, North Yorkshire.

Site: 1132–1539 with later robbing.
Axe blade with vertical cutting edge, hammer plain. Slight expansion around eye which retains nail and wedge which secured former handle. L 223mm.
DAMHB Collection, London.

**C20 AXE**
Fountains Abbey, North Yorkshire.
Site: 1132–1539 with later robbing.
Expansion around eye, two vertical cutting edges. Lugs below eye. L 181mm.
DAMHB Collection, London.

**C21 PUNCH**
king's Lynn, Norfolk.
*c*1250–1300.
Burred head and octagonal-sectioned stem.
L 257mm.
Goodall and Carter 1977, 295, fig 134.38.

**C22 PUNCH**
Winchester, Hampshire.
Late 10th–11th century.
Expanded head and broken, circular-sectioned stem. L 236mm.
Goodall 1990-9, fig 67.412.

**C23 PUNCH**
Winchester, Hampshire.
Late medieval.
Broken rounded stem becoming rectangular towards tip. L 205mm.
Goodall 1978a, 139, fig 56, scale 1:2, not 1:1.

**C24 PUNCH**
Southampton, Hampshire.
1250–1300.
Burred head to circular-sectioned stem becoming rectangular towards tip. L 199mm.
Harvey 1975b, 279, fig 251.2019.

**C25 PUNCH**
Weoley Castle, Birmingham, West Midlands.
*c*1270–1600.

Expanded head and octagonal-sectioned stem becoming rectangular towards tip. L 170 mm.
Taylor 1974. For site see Oswald 1962.

**C26 PUNCH**
Winchester, Hampshire.
1250–1320.
Burred head and octagonal-sectioned stem becoming rectangular towards tip.
L 120mm.
Goodall 1990-9, fig 67.413.

**C27 PUNCH**
Folkestone, Kent.
Mid 12th century.
Rectangular-sectioned punch, incomplete.
L 82mm.
Pitt-Rivers 1883, 463, pl XVIII.20.

**C28 CHISEL**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.
Expanded head, octagonal-sectioned stem.
L 279mm.
O'Neil 1944–45, 42, pl X.25.

**C29 CHISEL**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Expanded head, octagonal-sectioned stem becoming rectangular towards broken, flaring blade. L 334mm.
Goodall 1979a, 118, fig 62.56.

**C30 CHISEL**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080–1600.
Slightly expanded head, octagonal-sectioned stem becoming rectangular towards flaring blade. L 271mm.
Birmingham City Museum, WC 432. For site see Oswald 1962.

**C31 CHISEL**
Barton Blount, Derbyshire.

15th century.
Expanded head, octagonal-sectioned stem, flaring blade. L 160mm.
Goodall 1975b, 97, fig 46.6.

**C32 CHISEL**
Winchester, Hampshire.
Mid 12th–early 13th century.
Expanded head, octagonal-sectioned stem. L 156mm.
Goodall 1990-9, fig 67.414.

**C33 CHISEL**
Upton, Gloucestershire.
Late 13th to late 14th century.
Expanded head, rectangular-sectioned stem, flaring blade. L 123mm.
Hilton and Rahtz 1966, 120, fig 14.31.

**C34 CHISEL**
Kennington, Greater London.
From foundations of building built 1353–55.
Expanded head, rectangular-sectioned stem. L 71mm.
Dawson 1976, 87, fig 13.13.

**C35 CHISEL**
Dyserth Castle, Clwyd.
Site: 1241–63.
Expanded head, rectangular-sectioned stem.
L 292mm.
Glenn 1915.

**C36 CHISEL**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080–1600.
Slightly expanded head, rectangular-sectioned stem. L 249mm.
Birmingham City Museum, lab. no. 833. For site see Oswald 1962.

**C37 CHISEL**
Weoley Castle, Birmingham, West Midlands.
*c*1270–1600.
Damaged expanded head, octagonal-sectioned stem becoming rectangular towards blade. L 217mm.
Taylor 1974. For site see Oswald 1962.

**C38 CHISEL**

Winchester, Hampshire.

Late 13th century.

Broken rectangular stem with flaring blade with single-sided bevel. L 91mm.

Goodall 1990-9, fig 67.415.

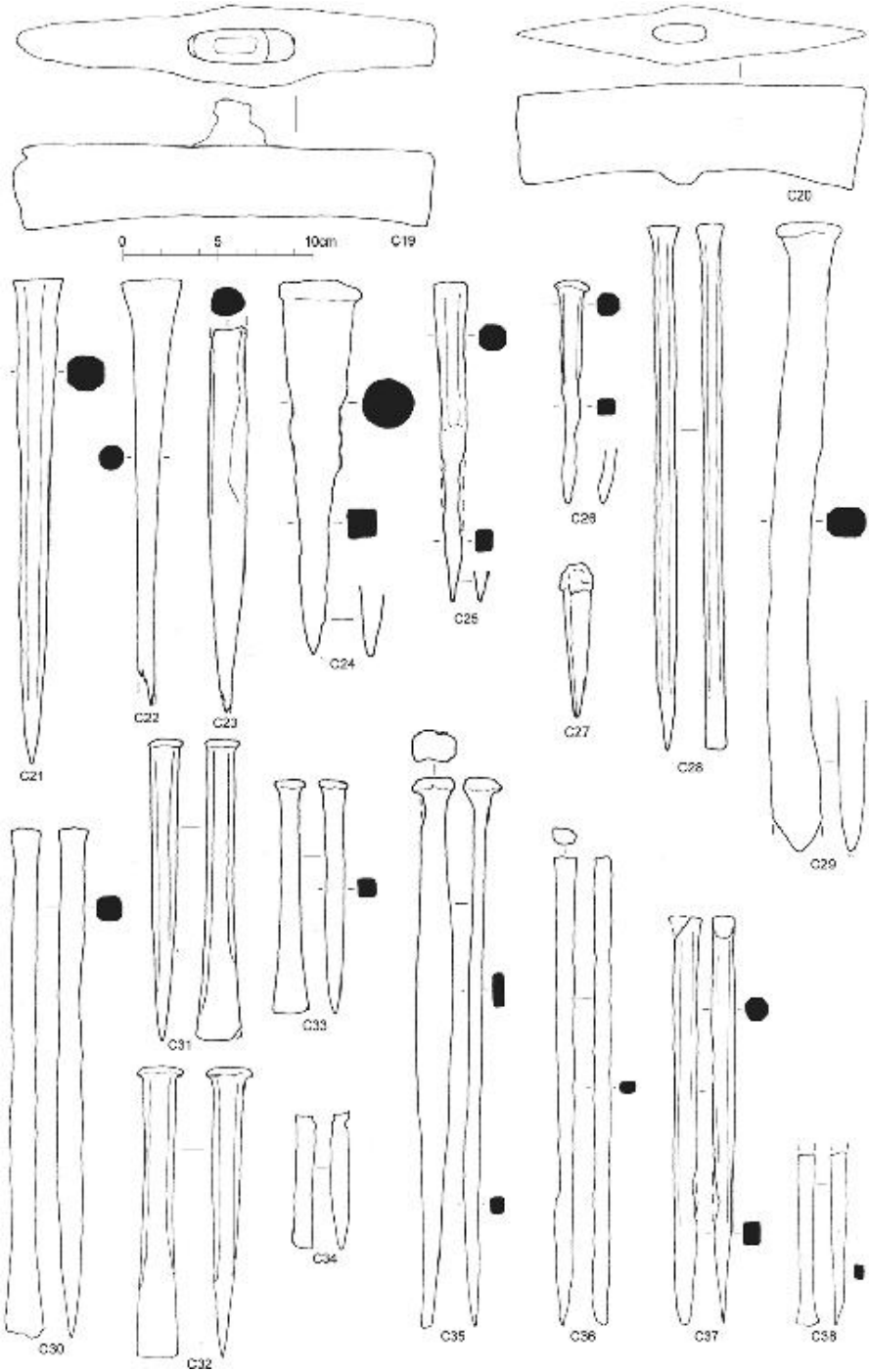



FIGURE 4.3
*Stoneworking tools: Hammer-axe, axe, punches, and chisels*

**C39 SAW**

Skenfrith Castle, Gwent.
Site: probably late 11th to 15th/16th century.
Push saw with broken blade and tang. Teeth, three to one inch (26mm), not set. Collar from former wooden handle at junction of blade and tang. L 345mm.
DAMHB Collection, London. For site see Craster 1970.

**C40 SCRIBER**
Conway, Gwynedd.
*c*1280 to 1400.
Tapering blade with whittle tang. L 141mm.
Excavated by L A S Butler. From the Old Vicarage.

**C41 PLUMB-BOB**
Lydney Castle, gloucestershire.
12th century, possibly into 13th century.
Lead plumb-bob with iron staple. D 45mm.
Casey 1931, 254, pl XXXVI.20.

**C42 PLUMB-BOB**
Norwich.
15th–17th century.
Lead plumb-bob of irregular elongated shape. Slight encrustation of rust suggests former attachment to iron fitting. L 74mm.
Hurst and Golson 1955, 101, fig 24.11.

**C43 LEWIS**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
Central wedge from lewis with broken bar,?originally separate, close to top. L 152mm DAMHB Collection, London.

**C44 TROWEL**
Castell-y-Bere, Gwynedd.
Site: *c*1221–1295.
Cranked tang, triangular blade. L 224mm.
Butler 1974, 97, fig 8.14.

**C45 TROWEL**
Castell-y-Bere, Gwynedd.
Site: *c*1221–1295.
Cranked tang, broken?triangular blade.

L 141mm.
Butler 1974, 97 (14-H).

**C46 TROWEL**
Winchester, Hampshire.
*c*1110.
Cranked tang with clenched tip, diamond-shaped blade. Blade ferrite with a hardness of 127 Hv. L 264mm.
Goodall 1990-9, fig 68.421.

**C47 TROWEL**
Winchester, Hampshire.
Late 13th–early 14th century.
Cranked tang with clenched tip, diamond-shaped blade. Tip lost. L 237mm.
Goodall 1990-9, fig 68.422.

**C48 TROWEL**
Winchester, Hampshire.
?Early 14th century.
Cranked tang, damaged diamond-shaped blade. L 168mm.
Goodall 1990-9, fig 68.423.

**C49 TROWEL**
Winchester, Hampshire.
Perhaps pre-12th century.
Broken cranked tang, damaged oval blade.
L 194mm.
Goodall 1990-9.

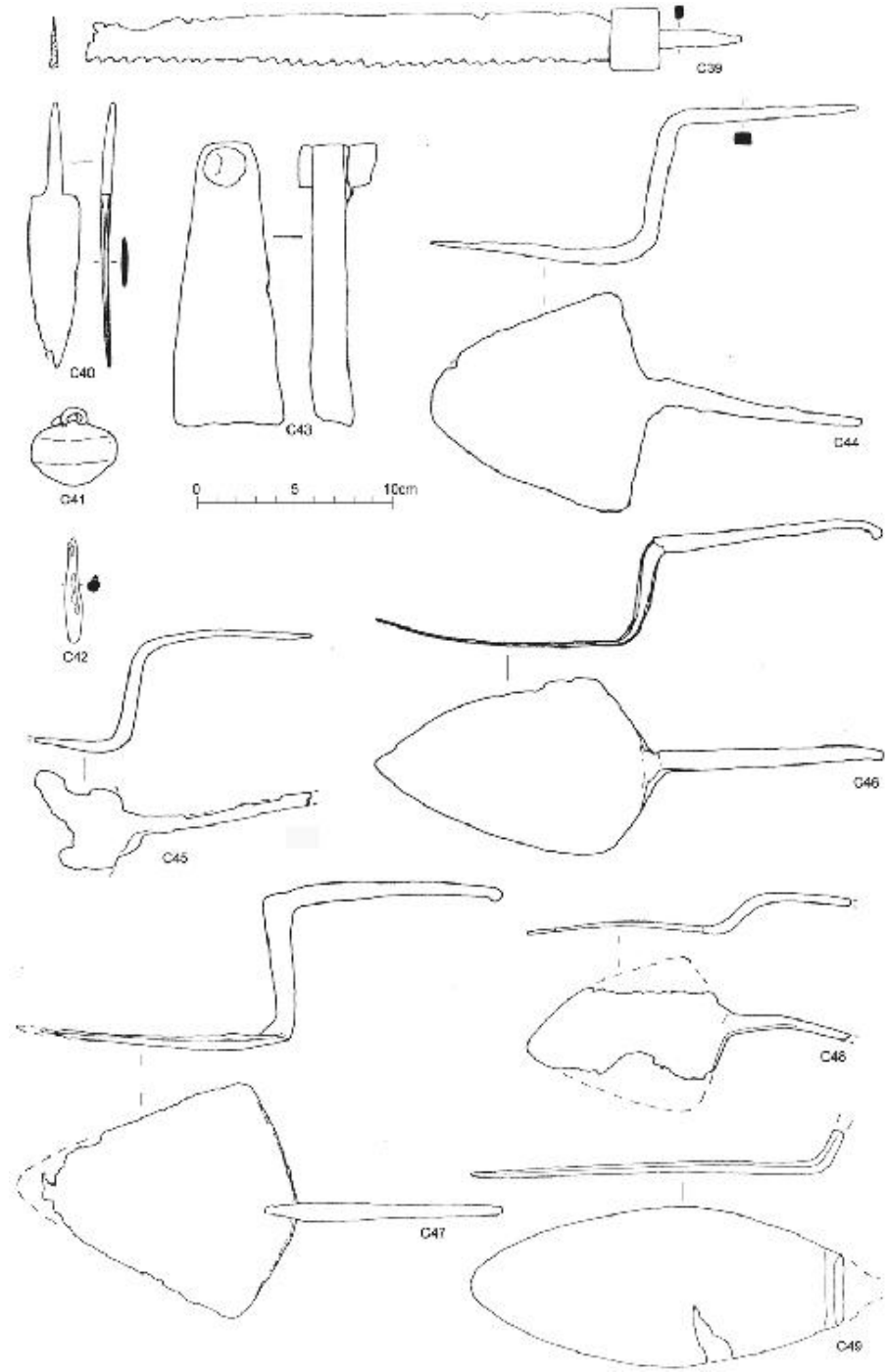



FIGURE 4.4
*Stoneworking and plastering tools: Saw, scriber, plumb-bob, lewis, and trowels*

**C50 HAMMER**

Goldsborough, North Yorkshire.
Site: 13th–15th century.
Two cutting edges, expansion round and below circular eye. L 163mm.
Excavated by P V Addyman.

**C51 PICK**
Kirkcudbright Castle, Dumfries and Galloway.
*c*1288–1308.
Double-ended pick of rectangular section with lugs below eye. L 155mm.
Dunning *et al* 1957–58, 137–138, fig 7.1.

**C52 PICK**
Hen Domen, Powys.
First half 13th century.
Tapering rectangular section. L 96mm.
Barker and Higham 2000.

**C53 PICK**
Winchester, Hampshire.
Late 13th–early 14th century.
Tapering rectangular section. Tip consists of ferrite with some partly spheroidised pearlite. Carbon content in the range of 0.1–0.2%, but on one side it rises to 0.6%.
Hardness of low carbon areas is 95 HVI.
L 102mm.
Goodall 1990-9, fig 67.419.

**C54 PICK**
Winchester, Hampshire.
*c*1400–*c*1450.
Tapering rectangular section. L 103mm.
Goodall 1990-9, fig 67.420.

**C55 PICK**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Tapering circular section. L 111mm.
Excavated by P J Fowler.

**C56 PICK**
Winchester, Hampshire.
*c*1138–41.

Tapering rectangular and circular sections.
L 118mm.
Goodall 1990-9, fig 67.418.

**C57 PICK**
Winchester, Hampshire.
10th century.
Tapering rectangular section, one end damaged. L 121mm.
Goodall 1990-9, fig 67.417.

**C58 PICK**
Bramber Castle, West Sussex.
14th century.
Tapering rounded rectangular section.
L 125mm.
Barton and Holden 1977, 66, fig 20.14.

**C59 PICK**
Woodperry, Oxfordshire.
12th to 14th century pottery.
Tapering rectangular section. L 130mm.
Ashmolean Museum, Oxford, 1873. 54.
Wilson 1846.

**C60 PICK**
Weoley Castle, Birmingham, West Midlands.
*c*1270–1600.
Tapering rectangular section. L 129mm.
Taylor 1974; Oswald 1962.

**C61 PICK**
Beckery Chapel, Glastonbury, Somerset.
12th–13th century,?earlier.
Tapering square shank. L 152mm.
Rahtz and Hirst 1974, 61, fig 22.14.

**C62 PICK**
King's Lynn, Norfolk.
*c*1250–1350.
Tapering rectangular section. L 176mm.
Goodall and Carter 1977, 295, fig 134.39.

**C63 MILL-PICK**
South Witham, Lincolnshire.
*c*1220 to late 13th century. From mill sluice.
Tapering rectangular section. L 212mm.
Goodall 2002, fig 7.3, no. 29.

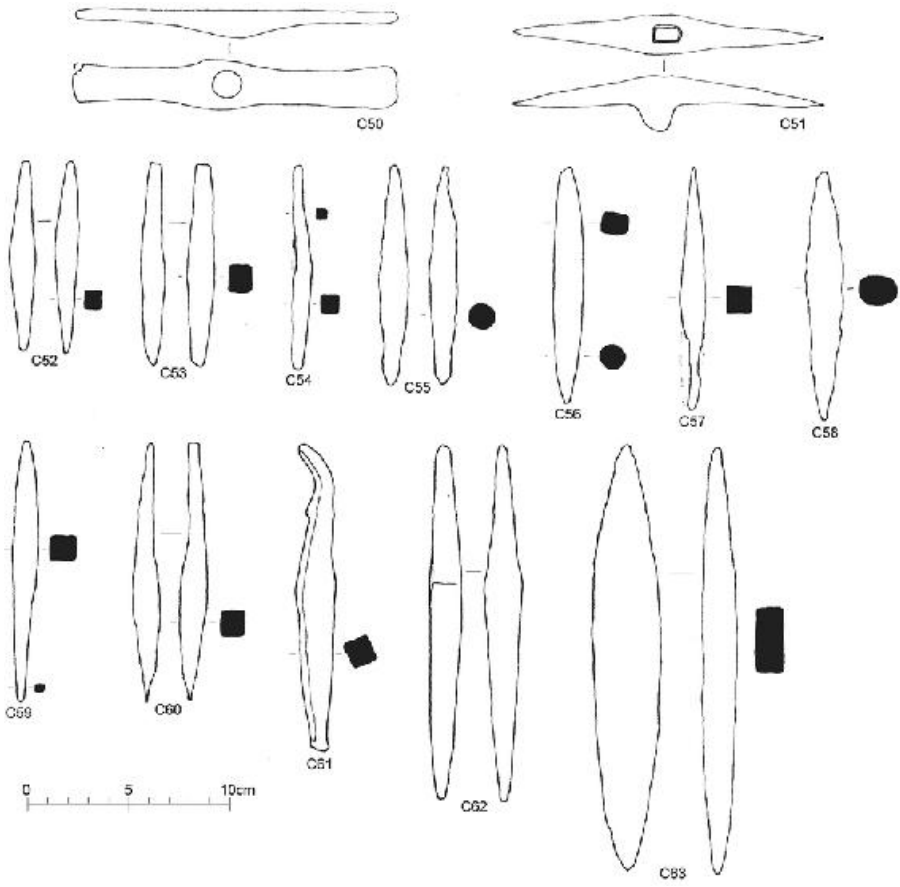



FIGURE 4.5
*Stoneworking tools: Hammer, picks, and mill-pick*

# 5
# Textile Manufacturing Tools

The wool trade was for centuries the main source of England's wealth, and the production of the raw materials for weaving cloth involved the use of such tools as heckles, carding combs and weaving combs. Forceps, tenter hooks, harbicks and cloth shears were used in the finishing of the cloth (for general works relevant to textile manufacture see Jenkins 1965, 176–184; Barker 1957; Patterson 1957; Rose 1957; Woodhouse 1957).

## 5.1 Fibre Preparation

Wool and flax fibres were prepared for spinning with heckles and carding combs. Wool was sorted after shearing, that of better quality being used for ordinary cloths, the worst for coarse cloth, and it was then washed or scoured to remove grease, perspiration salts and foreign matter such as dust and burrs. After drying it was disentangled and the fibres separated by combing or carding. Long stapled wools generally used for making worsted and fine cloths were prepared for spinning with heckles which brought their fibres as near as possible parallel. The short stapled wools, together with the shorted fibres left on the combs which were unsuitable for worsted cloth, were processed with carding combs which thoroughly mixed all the fibres.

Linen was woven from the best fibres in the stems of flax. After pulling, the flax stalks were dried, deseeded and then retted to enable the bark to be peeled from the woody core. The fibres were separated from the core by crushing and beating or scutching, and the scutched fibre was then combed to split up the flax and separate the fibres, often with a heckle similar to that used in wool preparation. The fibres were then twisted into yarn, the fine yarns used for weaving high quality linen, the coarse for rope, etc.

## 5.2 Heckles

To avoid confusion with earlier woolcombs made entirely of iron, and in order

not to imply their use solely with wool, the combs used in preparing both wool and flax fibres for spinning are termed heckles.

Medieval heckles most commonly survive as individual iron teeth, since few complete or partially complete examples are known. Earlier examples and medieval representations provide evidence of their form, however, and of alternative methods of mounting the iron teeth. The most common medieval and earlier type of heckle had two or more rows of iron teeth set in a rectangular wooden block with a handle. The block sometimes had an iron binding on the underside and along the front and sides, as have heckles of middle Saxon to medieval date from Wicken Bonhunt in Essex (Wade 1980), Thetford in Norfolk (Goodall 1984) and Århus in Denmark (Andersen *et al* 1971, 138–139). A heckle from a Viking grave at Harrold, Bedfordshire, however, evidently had no such binding (Evison 1970, 39, 42, fig 12 i–k). Heckle tooth **D12** retains a small fragment from the underside of such a sheet binding, but its absence from the other teeth is in no way significant since teeth and binding were separate elements. **D1** is an alternative form of heckle with its teeth set in a semicircular-sectioned, iron-bound head which may have fronted a deeper wooden block and handle.

Medieval illustrations imply that the teeth may sometimes have been fitted into fixed 'stock-cards'. A 15th-century illustration (Salzman 1964, 213) shows a woman drawing handfuls of wool through a group of upright iron teeth set into the top of a circular stand, whilst another of 14th-century date, although of Italian origin (Patterson 1957, fig 159) shows bundles of flat fibres being drawn through a group of teeth set in a bench top. It is possible that the longer teeth are from such fittings.

Surviving heckle teeth **D1–43** vary considerably in length, the complete ones (**D1–19**) from 88mm to 177mm, and the incomplete ones, of which **D20–43** are a selection, are up to 203mm. insufficient complete heckle teeth survive for the lengths to be particularly significant, although there is a concentration between 93 and 109mm in length. modern techniques of 'hand-hackling' flax fibre (Woodhouse 1957, 159) may offer some explanation of the differing lengths of heckle teeth since they involve drawing heckles with 178mm long teeth through the flax, then others with more closely spaced, 128mm long teeth, and if necessary others with increasingly fine and more closely set teeth to produce finer yarns. Heckle teeth are both circular and rectangular in section, and all taper to a point. The heads are plain, flattened or have a side expansion, the shaping perhaps intended to secure them more firmly in the wooden block.

Heckles were generally used in pairs and their teeth warmed before use. A mass of wool was transferred from one comb to another and back until only long parallel fibres remained. A 14th-century illustration (Patterson 1957, fig

156) shows a pair in use in conjunction with a propped upright stand.

## 5.3 Carding Combs

Carding combs, wooden boards with handles and rows of inclined iron wire teeth, were used in pairs to disentangle wool and bind the fibres together, a small quantity of wool placed on one cad being teased out until a perfect mixture of fibres resulted. A 15th-century illustration shows a pair of combs in use (Salzman 1964, 213), but no medieval example is yet known. A fragment of a comb from a later 16th to 17th-century context comes from Northampton (Goodall *et al* 1979, 273, fig 119.65).

## 5.4 Weaving Combs

Spun thread was woven on looms and iron weaving combs such as **D44–45** were used to beat in the weft, particularly in tapestry-work and rug weaving. **D44** is incomplete and a band of tinning along the toothed edge may have been intended to counter corrosion which would have discoloured the cloth. **D45** is almost complete and holes in the side edges and along the top show that it was set in a handle, probably of wood. Both weaving combs have worn teeth, and both probably had handles which were set at an angle to the blade.

## 5.5 Forceps

After weaving, the first stage of 'finishing' cloth involved hanging it over a rail or spreading it on a table and removing extraneous matter with forceps. **D46** has the fine, precise tips needed in forceps used to remove particles before cloth was sent to be fulled.

## 5.6 Tenter Hooks

Woollen and linen cloth was fulled, the former in order to felt and thicken the cloth and so cause the fibres to adhere to each other and obliterate in the weave, the latter to separate the stiff groups of fibres into smaller and softer ones. After fulling, scouring and rinsing, the wet cloth was stretched on tenters to dry.

References to the leasing of tenter grounds are common in medieval town records (Salzman 1964, 224), and a tenter ground is depicted in the moorfields area of London on a map of 1559–60 (Holmes 1966, 113, pls XXXVIII and XLb). The medieval tenter or tenter frame comprised two horizontal wooden rails supported by vertical posts. The pairs of rails each had a row of tenter hooks set along them, the hooks pointing upwards in the upper rail and downwards in the lower. Cloth was attached to the hooks and tension adjusted by utilising housings in the posts. Some stretching of cloth was legitimate and necessary, but there was a temptation to stretch cloth excessively and weaken it, and in the 16th century ordinances were issued against the use of powerful racks with levers, winches and ropes (Salzman 1964, 224).

Iron tenter hooks **D47–71** are slender and have tapering shanks and hooks, the latter commonly straight and either perpendicular (**D68**), inturned (**D52**) or out-turned (**D49**). Some of the less common hook shapes, such as the hooked tip of **D55**, the curved hook of **D58**, and the strongly out-turned hook of **D47** may be the result of distortion during use. Complete hooks range in length from 18 to 39mm, and shanks from 20 to 54mm. Some 55 more medieval tenter hooks from Winchester, not catalogued, have hooks between 18 and 32mm in length (Goodall 1990-6). This range in tenter hook size reflects the differing types of cloth stretched, and the spacing of hooks in the tenter frames will have varied accordingly. Tenter hooks with 25mm long hooks on a tenter frame in the Tolson memorial museum in Huddersfield (West Yorkshire) are some 70mm apart.

## 5.7 Harbicks and Cloth Shears

After tentering, a softer finish was given to woollen cloth by shearing. The cloth was stretched over a bar and the nap raised by brushing with teasels mounted in a wooden frame, as depicted in the cloth-workers' window of *c*1460–65 at Notre Dame, Semur-en-Anxois, France (Carus-Wilson 1957, 110, pl XVIb; Harvey 1975a, pl 111). The cloth was then transferred to a cropping board or horse for shearing, and a misericord at Brampton, Cambridgeshire (Carus-Wilson 1957, 106, pl XVc) shows this process under way with the cloth

secured to the board by a pair of harbicks or shearboard hooks of the type represented by **D72–73**. Harbicks are double-ended hooks, and the misericord shows that one hook was fixed in the selvedge of the cloth and the other in the padded surface of the board. **D72–73** are of iron and have straight arms; two other examples from Winchester are of copper alloy and have curved arms (Goodall and Keene 1990). All four are decorated or shaped in some way.

No large pairs of cloth shears similar to those depicted on the Lane Chapel in Cullompton, Devon, and elsewhere are yet known (Carus-Wilson 1957, 104–109, pls XIII, XVe, XVIa, c–d). They have large bows and broad, flat-ended blades, and modern examples can be over 1m long with blades about 46cm long. **G474** may be a blade and handle fragment.

## 5.8 Needleworking Tools

Iron tools suitable for use in needleworking could also all have been used by other craftsmen. Some of the shears and scissors discussed below (**G418–421**) may have been used to cut cloth and thread, just as some of the needles **E60–80** will have been used for sewing cloth rather than leather. **E81–83** may also have been used in needleworking.

**D1 HECKLE**
Norwich.
In 1507 fire deposit.
Part of heckle with teeth set in semicircular iron-bound top. L 147mm.
Goodall 1993f, fig 134, no. 1420.

**D2 HECKLE TOOTH**
Winchester, Hampshire.
13th century.
Complete. L 88mm.
Goodall 1990-4, 216, no. 59.

**D3 HECKLE TOOTH**
Llanstephan Castle, Dyfed.
Site: 12th to 15th century.
Shaped head, tip lost. L 93mm.
Excavated by G Guilbert.

**D4 HECKEL TOOTH**

Llantrithyd, South Glamorgan.
Early to mid 12th century.
Complete. Shaped head. L 95mm.
Goodall 1977f, 47, iron object fig 2.34.

**D5 HECKLE TOOTH**
Goltho Manor, Lincolnshire.
11th century.
Complete. L 96mm.
Goodall 1987, fig 156.13.

**D6 HECKLE TOOTH**
Winchester, Hampshire.
Mid to late 13th century.
Shaped head, distorted but complete shank. L 97mm.
Goodall 1990-4, fig 44.56.

**D7 HECKLE TOOTH**
Rhuddlan, Clwyd.
?Mid 13th century.
Complete but distorted. Shaped head. L 98mm.
Goodall 1994, fig 17.1, no. 9.

**D8 HECKLE TOOTH**
Winchester, Hampshire.
13th century.
Shaped head, tip lost. L 99mm.
Goodall 1990-4, 216, no. 58.

**D9 HECKLE TOOTH**
Eaton Socon, Cambridgeshire.
in medieval ditch fill but probably derived from settlement with floruit in 11th century.
Complete. Shaped head. L 102mm.
Addyman 1965, 65, fig 11.3.

**D10 HECKLE TOOTH**
upton, Gloucestershire.
Mid to later 13th century.
Complete. L 104mm.
Rahtz 1969a, 108, fig 12.95.

**D11 HECKLE TOOTH**
Winchester, Hampshire.
Mid to?late 13th century.
Complete. L 105mm.
Goodall 1990-4, fig 44.55.

**D12 HECKLE TOOTH**
Winchester, Hampshire.
Late 13th–early 14th century.
Complete. Fragment of binding plate from handle 16mm below head. L 106mm.
Goodall 1990-4, fig 44.61.

**D13 HECKLE TOOTH**
Winchester, Hampshire.
Mid to late 13th century.
Complete. Metallurgy: ferrite with some grain; boundary carbide and slag; very heterogeneous; hardness 109 HVI. L 109mm.
Goodall 1990-4, fig 44.57.

**D14 HECKLE TOOTH**
Stonar, Kent.
*c*1225–1275.
Complete. L 118mm.
Excavated by N Macpherson-Grant.

**D15 HECKLE TOOTH**
Lyveden, Northamptonshire.
1475–1500.
?Complete. L 125mm.
Steane and Bryant 1975, 134, fig 50.192.

**D16 HECKLE TOOTH**
Thuxton, Norfolk.
Site: 12th to end 14th century.
Complete. Shaped head. L 136mm.
Excavated by L A S Butler.

**D17 HECKLE TOOTH**
London.
Late 13th to 14th century.
Complete. Shaped head. L 151mm.

Henig 1974, 195, fig 39.93.

**D18 HECKLE TOOTH**
Gloucester.
14th/15th century.
Complete. L 173mm.
Excavated by H Hurst.

**D19 HECKLE TOOTH**
Oxford.
*c*1325 to *c*1400.
Complete but distorted. L 177mm.
Goodall 1977e, 142, fig 26.20.

**D20 HECKLE TOOTH**
Northampton.
Late Saxon to?later 14th century.
Shaped head, shank broken. L 60mm.
Goodall 1979b, 71, fig 17.14.

**D21 HECKLE TOOTH**
Brixworth, Northamptonshire.
12th to 14th century.
Broken shank. L 67mm.
Goodall 1977g, 94, fig 9.13.

**D22 HECKLE TOOTH**
Walton, Aylesbury, Buckinghamshire.
12th–13th century.
Circular section, tip lost, shaped head.
L 69mm.
Farley 1976, 267 fig 49.1.

**D23 HECKLE TOOTH**
Northampton.
11th–14th century.
Shaped head, shank broken. L 72mm.
Goodall 1979b, 71, fig 17.12.

**D24 HECKLE TOOTH**
Walton, Aylesbury, Buckinghamshire.
12th–13th century.

Head broken. L 72mm.
Farley 1976, 267, fig 49.2.

**D25 HECKLE TOOTH**
Winchester, Hampshire.
Late 11th–12th century.
Tip broken. L 74mm.
Goodall 1990-4, fig 44.53.

**D26 HECKLE TOOTH**
Oxford.
First half 12th century.
Shank broken. L 82mm.
Goodall 1977e, 142, fig 26.19.

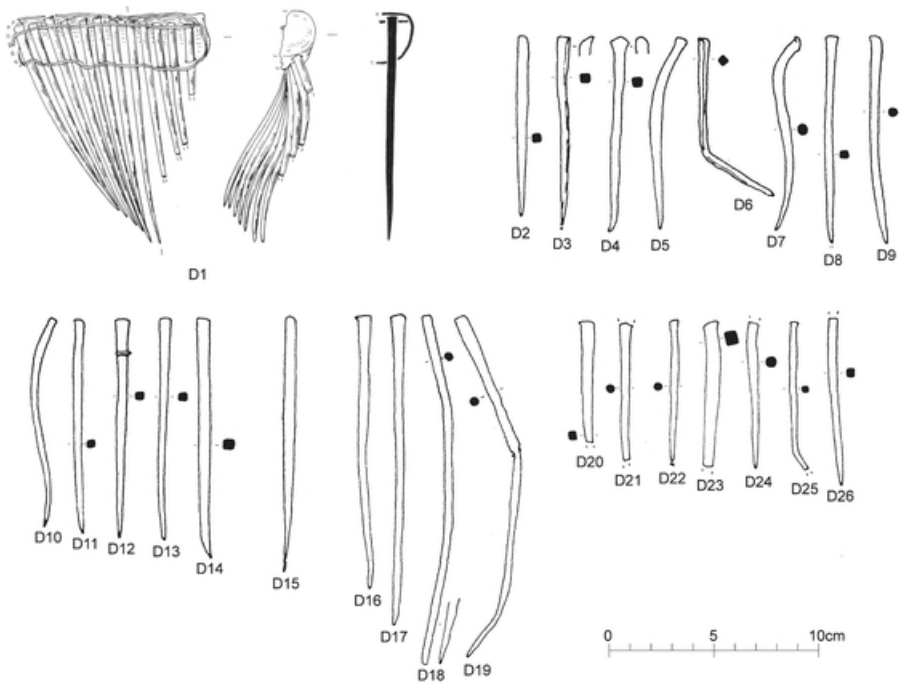



FIGURE 5.1
*Textile manufacturing tools: Heckle teeth*

**D27 HECKLE TOOTH**
Brixworth, Northamptonshire.
Saxon to mid 15th century.
Shank broken. L 82mm.
Goodall 1977g, 94, no. 14.

**D28 HECKLE TOOTH**
Winchester, Hampshire.
13th century.
Shaped head, tip lost. L 88mm.
Goodall 1990-4, 216, no. 60.

**D29 HECKLE TOOTH**
Wroughton Copse, Fyfield Down, Wiltshire.
Site: *c*1150–1315.
Shank broken. L 93mm. Five others of similar length.
Excavated by P J Fowler.

**D30 HECKLE TOOTH**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Shank broken. L 94mm.
Goodall 1987, 178, no. 12.

**D31 HECKLE TOOTH**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Shank broken. L 98mm.
Goodall 1977f, 43, iron object fig 2.32.

**D32 HECKLE TOOTH**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Shank broken. L 99mm.
Goodall 1977f, 47, iron object fig 2.33.

**D33 HECKLE TOOTH**
London.
Late 13th to mid 14th century.
Shaped head, broken shank. L 102mm.
Henig 1974, 195, no. 97.

**D34 HECKLE TOOTH**
Wallingstones, Hereford and Worcester.
1300/25 to 1500.
Head broken. L 102mm.
Bridgewater 1970–72, 104, no. 75.

**D35 HECKLE TOOTH**
Wharram Percy, North Yorkshire.
Early 15th century.
Head and tip lost. L 102mm.
Goodall 1979a, 118, fig 62.53.

**D36 HECKLE TOOTH**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Tip lost. L 106mm.
Goodall 1979a, 118, fig 62.54.

**D37 HECKLE TOOTH**
Winchester, Hampshire.
Late 11th–12th century.
Shaped head, tip lost. L 107mm.
Goodall 1990-4, fig 44.52.

**D38 HECKLE TOOTH**
London.
Late 13th to mid 14th century.
Shaped head, tip lost. L 108mm.
Henig 1974, 195, no. 129.

**D39 HECKLE TOOTH**
Northampton.
11th to 14th century.
Shank broken. L 124mm.
Goodall 1979b, 71, fig 17.11.

**D40 HECKLE TOOTH**
Thuxton, Norfolk.
Site: 12th to end 14th century.
Tip broken. L 128mm.
Excavated by L A S Butler.

**D41 HECKLE TOOTH**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Shaped head, broken shank. L 142mm.
Area 6, SF 20898, Pd VI; Andrews and Milne 1979.

**D42 HECKLE TOOTH**
Stonar, k ent.
*c*1275–1385.
Tip broken. L 184mm.
Excavated by N m acpherson-Grant.

**D43 HECKLE TOOTH**
Stonar, k ent.
*c*1275–1385.
Tip broken. L 203mm.
Excavated by N Macpherson-Grant.

**D44 WEAVING COMB**
Winchester, Hampshire.
12th century.
1.5mm thick, broken, sheet iron comb with straight, toothed blade and sloping side.
10mm band of tinning immediately above teeth. W 68mm.
Goodall 1990-5, fig 49.224.

**D45 WEAVING COMB**
Newbury, Berkshire.
*c*1350–90.
1.5mm thick sheet iron comb with straight, toothed blade and shaped back. Teeth, lost in centre, 6mm deep, with 14 in a 30mm length.
15 holes along back, two groups of four at lower corners. W 243mm.
Goodall 1997, fig 19, no. 3.

**D46 FORCEPS**
London.
Late 13th to 14th century.
Looped bow and spatulate arms terminating in pointed tips with simple, decorative edge filing. L 123mm.
Henig 1974, 191, fig 38.55.

**D47–68 TENTER HOOKS**
Winchester, Hampshire.
Goodall 1990-6, fig 44.55.
D47 Late 13th–early 14th century. H 19mm.
BS 2123. Goodall 1990-6, fig 50.288.
D48 Mid to?late 13th century. H 17mm.
Goodall 1990-6, fig 50.251.

D49 Mid to?late 13th century. H 18mm.
Goodall 1990-6, 236, no. 252.
D50 Mid to late 10th century. H 21mm. BS 4244. Goodall 1990-6, 235, no. 225.
D51 14th to?15th century. H 14mm (broken). Goodall 1990-6, fig 50.296.
D52 Mid to?late 13th century. H 18mm (broken). Goodall 1990-6, 237, no. 254.
D53 13th century. H 24mm. Goodall 1990-6, fig 50.279.
D54 Mid to late 13th century. H 21mm.
Goodall 1990-6, 237, no. 257.
D55 Early 13th century. H 21mm. Goodall 1990-6, fig 50.238.
D56 14th–?15 century. H 28mm. Goodall 1990-6, fig 50.299.
D57 13th century. H 30mm. Goodall 1990-6, fig 50.266.
D58 Mid 12th–mid 13th century. H 26mm.
Goodall 1990-6, 236, no. 244.
D59 Early to mid 13th century. H 31mm.
Goodall 1990-6, fig 50.247.
D60 Early to mid 13th century. H 38mm.
Goodall 1990-6, fig 50.248.
D61 Mid 13th century. H 24mm. Goodall 1990-6, 236, no. 249.
D62 Late 14th–15th century. H 18mm (broken). Goodall 1990-6, fig 50.300.
D63 13th century. H 26mm. Goodall 1990-6, fig 50.265.
D64 13th century. H 32mm. Goodall 1990-6, fig 50.269.
D65 13th century. H 31mm. Goodall 1990-6, fig 50.268.
D66 Late 11th–early 12th century. H 33mm.
Goodall 1990-6, fig 50.230.
D67 *c*1250/60–*c*1310/20. H 37mm. Goodall 1990-6, fig 50.285.
D68 11th century. H 39mm. Goodall 1990-6, fig 50.229.

**D69 TENTER HOOK**
Rhuddlan, Clwyd.
Later(?) 13th century.
Shank and hook broken. H 9mm.
Goodall 1994, fig 17.1, no. 12.

**D70 TENTER HOOK**
Brixworth, Northamptonshire.
Saxon to mid 15th century.
Hook broken. H 8mm.
Goodall 1977g, 94, no. 16.

**D71 TENTER HOOK**
Brixworth, Northamptonshire.
Medieval.
Complete. H 18mm.
Goodall 1977g, 94, fig 9.15.

**D72 SHEARBOARD HOOK**
Winchester, Hampshire.
Medieval.
Straight arms with hooked ends, spirally twisted centre. L 108mm.
Goodall and keene 1990, fig 51.309.

**D73 SHEARBOARD HOOK**
Winchester, Hampshire.
15th century.
Straight arms, central moulding with decorative grooves formed by wound-round lengths of wire. L 64mm.
Goodall and Keene 1990, fig 51.308.

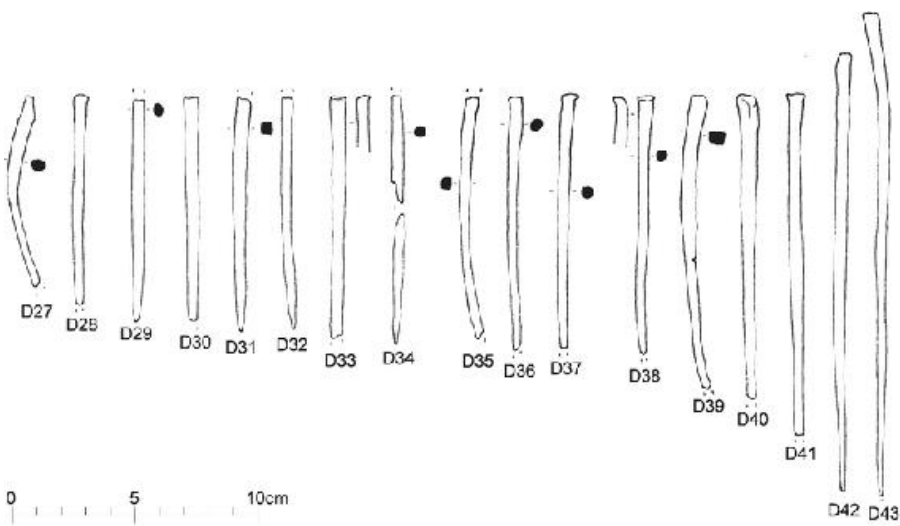



FIGURE 5.2
*Textile manufacturing tools: Heckle teeth*

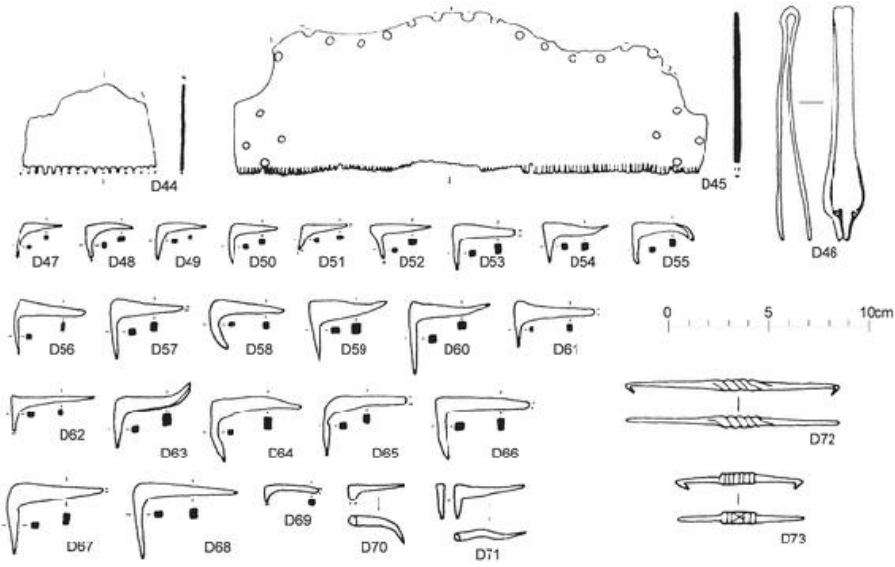



FIGURE 5.3

*Textile manufacturing tools: Weaving combs, forceps, tenter hooks and shearboard hooks*

# 6
# Tanning and Leatherworking Tools

Practically all processes of leather production and finishing have been mechanised, and details of the older, long-established procedures described below are taken from Waterer 1957 and 1968, Attwater 1961, Jenkins 1965 and Thomson 1978.

## 6.1 Tanning

Various preparatory processes had to be undertaken before tanning was begun, the first involving trimming away the ragged edges of hides and skins with shears or a knife before they were washed to remove blood and dung, and to re-hydrate them if necessary. The hides were next immersed in lime liquors to loosen the hair roots and lower layers of the epidermis which were scraped off over a wooden beam with a wide, blunt-edged curved knife which today has handles projecting horizontally from each end. A similar but sharp knife removed flesh from the underside, and a blunt-edged scudding knife was then used to remove short or broken hairs, dirt, and lime compounds. After this preparation the hides or the skins were immersed in a series of tanning liquors.

No medieval unhairing, fleshing or scudding knife similar to the modern examples illustrated by Waterer (1968, pl 4) and Jenkins (1965, fig 44, pl 164) is yet known, but it is not improbable that some of the knives and shears catalogued below (Chapter 8) were used to trim hide edges.

## 6.2 Currying

Tanned leather is stiff and badly coloured, and has to be dressed by the currier to acquire the pliancy, smoothness, grain and colour necessary for use. The currier's first task was to remove the 'bloom' and dried tanning liquor clogging up the grain by soaking and softening the hide in water and then scouring it with a hard brush. A knife called a slicker (or sleaker) was used to force out the dirt retained under the hair roots or just below the grain layer, and the flesh

side was then shaved until the surface was smooth and the leather of even substance all over. The currier's shaving knife (Waterer 1957, fig 115; 1968, pl 4) has a double-edged rectangular blade 250mm to 300mm long, 150mm deep, with one handle in the same plane and the other at right angles to it. The edges are turned at a right angle to the blade with a steel. After shaving, leather was impregnated on one or both sides with grease, which was rubbed in with a slicker; surplus grease was removed and the surface smoothed with a slicker with a slightly turned edge.

No medieval currier's shaving knife is yet known, but **E1–10** are all probably slickers. Modern slickers (Jenkins 1965, 198) have a flat steel blade some 150mm wide and 100mm deep set in a wooden handle, and **E1**, **E4** and **E7** all retain traces of such handles. Few of the medieval slickers are as wide as these modern ones, however, since complete blades range in width from 97mm to 148mm, and in depth from 17mm to 39mm. They were secured in their handles by tapering and generally pointed side arms set in the same plane but at right angles to the blade. The slicker resembles such carpenter's tools as the shave, spokeshave and drawing knife, and **E9** was published as a spokeshave, but it can be distinguished from these by size, by its distinctive method of hafting, and by the position of its sharp edge along the bottom of the blade.

## 6.3 Leatherworking Tools

Knives, which may be divided into cutting knives and paring knives, are probably the most important tool of the craftsmen in leather. Other tools to survive are creasers used for edge finishing, awls for piercing, and needles for sewing and stitching. No punch is yet known.

### Cutting knives

Harness makers, saddlers, shoemakers and glovers all used leather of differing thicknesses, and there is some variation in the types of knife used to cut it.

The round or half-moon knife, so-called from the shape of its blade, was used to cut heavy material such as harness leather, but no medieval example is yet known.

**E11–14** will have been used to cut thinner leather, and various post-medieval illustrations show similar knives being used by shoemakers. The

knives have waisted blades with cutting edges curving out to the tip and a spike in line with the back of the blade. The spike, although sometimes exaggerated as on **E14**, is generally unlikely to have been conveniently usable as an awl although it may have been used for piercing holes for thongs. On **E12** the spike is in fact little more than one end of a second cutting edge which could have been used for trimming. These knives resemble the modern butt knife, used to cut sole leather (Waterer 1968, pl 5.24), and combine the functions of the modern ranging knife and welt knife.

**E15** resembles a modern clicking knife used for cutting thinner leather. The type characteristically has a narrow, thin blade which may today be straight, curved, or curved only at the tip (Waterer 1968, pl 5, 18–20).

## Paring knives

**E16–19** are paring or skiving knives with broad, triangular blades which flare out towards the cutting edge. They were used to shave away thin pieces from the flesh side of a hide to level its surface or reduce its substance, particularly at edges where there could be excessive thickness. Another use was in bevelling or scarfing, that is cutting through a piece of leather at a continuous angle so that it could be joined invisibly to a second piece. **E16-18** have slender blades, but the more substantial blade of **E19** has a ground cutting edge and from its shaping was intended for use by a left-handed worker. Modern paring knives can be similarly shaped (Attwater 1961, 26, fig 7).

## Creasers

Today most flat work is given a crease line, single or double, fairly close to the outer edge in order to finish it. The crease compresses the leather and gives it a slightly darker and shiny line which, although decorative, is primarily functional since the compression hardens the leather, makes it more resistant to wear, and seals any joint. lines are also creased in other places away from the edge to give embellishment.

**E20–21** are single line creasers of similar form, both with incomplete tangs originally hafted in wooden handles. in use, to make the crease line permanent, the creaser was heated, the amount of heat varying according to the nature of the leather.

## Awls

Medieval awls **E22–59** are of many different kinds, from fine to coarse, and of round, square and diamond-shaped section according to the hole to be pierced and stitch to be used. Most (**E22–58**) are straight, although a few of the incomplete ones may have lost curved tips similar to **E59**, itself a curved awl used for corner sewing or closing. The majority of awls **(E22–49**) taper evenly and often almost imperceptibly towards each end, but the expanded shoulders of **E50–55** and reduced shoulders of **E56–58** allowed greater pressure to be exerted on the handle of the awl during use. The expanded shoulders are found on a modern saddler's seat awl, and the reduced shoulders on a pegging awl (Waterer 1968, pl 7 D–E).

All the awls have square or diamond-sectioned tangs, so shaped to prevent the tool turning in the handle, but the blades vary in cross section. **E22–29**, **E50–51**, **E53–54** and **E58–59** are square, **E30–38** diamond-shaped, **E39-43** diamond-shaped but rounded at the tip, and **E44–49**, **E52** and **E55–56** round. **E48** retains a bone handle, whilst traces of wooden handles remain on **E44** and **E47**.

Some of the larger tools such as **E52** and **E54** may not be awls, and might have been used as steels to sharpen and turn the edges of slickers used during the last stages of currying.

## Needles

Medieval needles were made in both iron and copper alloy, iron being used for both large and small needles. The iron needles are of two main types: Type 1 generally with circular-sectioned shanks; Type 2 with similar shanks which become triangular towards the point. Needles of each type can be either straight or curved.

— Type 1: Needles **E60 –74** generally have circular-sectioned shanks, and complete examples range in length from 46mm to 171mm. The eyes of **E60–64** are punched within the thickness of the shank, whilst **E65–72** have expanded eyes. **E73–74** are shank fragments.

— Type 2: **E75–80** are needles with circular-sectioned shanks which become triangular towards the point. **E75** is an unfinished needle requiring only the punching of the eye, but **E76–78** have expanded eyes of differing shapes. **E79–80** are shank fragments.

Iron needles such as **E60–64** are likely to have been used for sewing either

textiles or leather since their plain form and eye would have offered no resistance to either material. They will have had many uses with textiles, or they could be saddlers' tools. The curvature of **E63** resembles that of a modern horse collar maker's needle. The larger needles with expanded eyes, **E71–72**, may have been used for netting, and some of the others for thonging. Needles with triangular-sectioned points are used by glovers, but **E75–78** have the wrong type of eye and are too large. Similar needles between 102mm and 456mm in length in a 1959 catalogue are termed 'packing needles' (ex inf V Wynne).

## Stilettos

**E81–83** are probably stilettos used to make the eyelet holes through which cords or laces were threatened (Groves 1966, 94–95, pls 9 and 157). All have, or had, small riveted handles with shaped caps or terminals and long, tapering shanks. **E81** has a rectangular perforation through the shank which would have allowed it to be used in the manner of a bodkin for re-threading cords or laces.

**E1 SLICKER**
Netherton, Hampshire.
Medieval.
Blade with remains of wooden handle and broken upright side arms. W 97mm.
Goodall 1990-28, fig 9.1 no. 43.

**E2 SLICKER**
Netherton, Hampshire.
Medieval.
Blade with upright side arms, both broken.
W 34mm.
Goodall 1990-28, fig 9.1 no. 44.

**E3 SLICKER**
Newbury, Berkshire.
*c*1200–1230.
Upright side arms broken. W 97mm.
Goodall 1997, fig 19, no. 4.

**E4 SLICKER**

King's Lynn, Norfolk.
*c*1250–1300.
Blade with remains of wooden handle along back and upright side arms, one broken.
W 105mm.
Goodall and Carter 1977, 295, fig 133.37.

**E5 SLICKER**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Blade with broken upright side arms.
W 105mm.
Excavated by P J Fowler.

**E6 SLICKER**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Blade with upright side arms, both broken.
W 26mm.
Excavated by P J Fowler.

**E7 SLICKER**
Wintringham, Cambridgeshire.
Late 13th century.
Broken blade with traces of wooden handle and upright side arm. W 78mm.
Goodall 1977a, 257, fig 46.61.

**E8 SLICKER**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Blade with upright side arms, one broken.
W 115mm.
Goodall 1980a, 513, fig 266.55.

**E9 SLICKER**
Knaresborough Castle, North Yorkshire.
12th century.
Blade with upright side arms, one broken.
W 131mm.
Waterman 1953, 213, fig 1.22.

**E10 SLICKER**
Winchester, Hampshire.
Early to mid 11th century.
Blade with broken upright side arms.
W 148mm.
Goodall 1990-7, fig 53b.325.

**E11 KNIFE**
King's Lynn, Norfolk.
*c*1150 to 1250.
Blade and tang broken. L 157mm.
Goodall and Carter 1977, 295, fig 133.36.

**E12 KNIFE**
Oakham Castle, Leicestershire.
13th to 14th century. Leather offcuts and shoes also found in moat.
Tang complete, damaged blade with cutler's mark. L 132mm.
Gathercole 1958, 33, fig 10.2.

**E13 KNIFE**
Waltham Abbey, Essex.
1530–70.
Blade and tang broken. L 132mm.
Excavated by P J Huggins. From Sun Street.

**E14 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade fragment. L 43mm.
Goodall 1975a, 87, fig 41.94.

**E15 KNIFE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Whittle tang broken, curving blade.
L 88mm.
O'Neil 1944–45, 42, pl X.39.

**E16 KNIFE**
Wallingstones, Hereford and Worcester.
First half 13th century.
Tang broken, curved cutting edge. L 72mm.

Bridgewater 1970–72, 100, fig 16.12.

**E17 KNIFE**
Wallingstones, Hereford and Worcester.
First half 13th century.
Tang broken, straight cutting edge. L 76mm.
Bridgewater 1970–72, 100, fig 16.11.

**E18 KNIFE**
Hampton Wafer, Hereford and Worcester.
Site: probably 11th to early 14th century.
Tang broken, curved cutting edge. L 97mm.
Stanford 1967, 87, fig 7.7.

**E19 KNIFE**
Kidwelly Castle, Dyfed.
Medieval.
Tang complete, cutting edge straight and ground. L 222mm.
For site see Fox and Radford 1933.

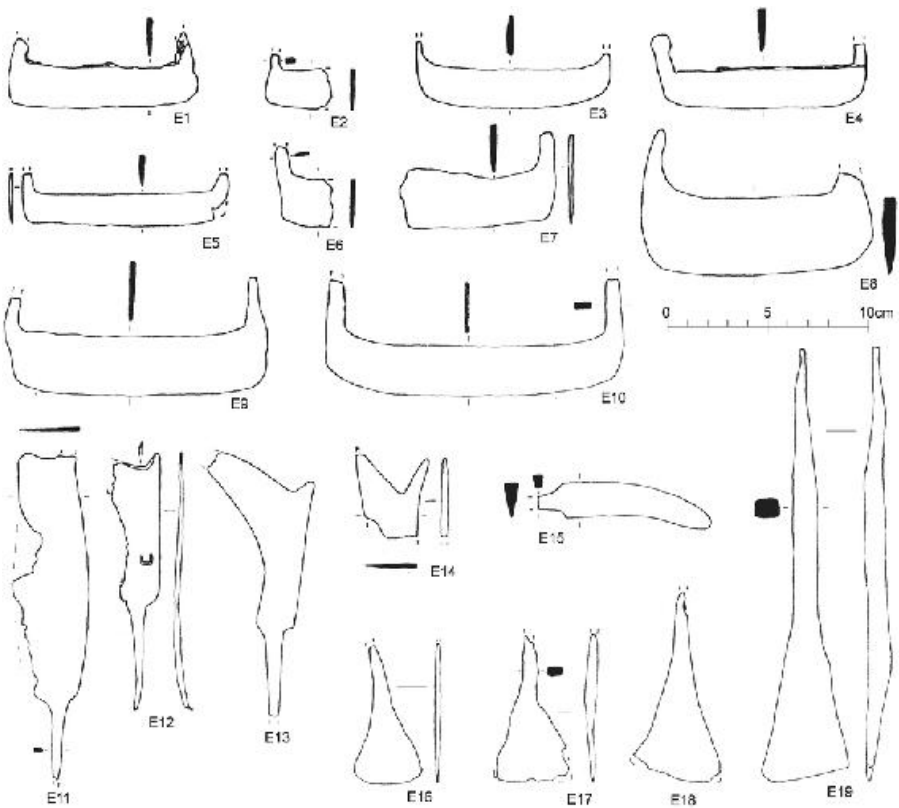


FIGURE 6.1
*Tanning and leatherworking tools: Slickers and leatherworking knives*

**E20 CREASER**
Netherton, Hampshire.
Late 13th to early 14th century.
Tong broken. L 99mm.
Goodall 1990-28, fig 9.1 no. 46.

**E21 CREASER**
Winchester, Hampshire.
Mid 15th century.
Tong broken. L 129mm.
Goodall 1990-7, fig 54.335.

**E22 AWL**
Wroughton Copse, Fyfield Down, Wiltshire.
12th century.
Rectangular-sectioned awl. L 60mm.
Excavated by P J Fowler.

**E23 AWL**
Winchester, Hampshire.
Late 11th–12th century.
Rectangular-sectioned awl, tip broken.
L 74mm.
Goodall 1990-7, 249. no. 327.

**E24 AWL**
Wroughton Copse, Fyfield Down, Wiltshire.
Site: 12th–13th century.
Rectangular-sectioned awl, broken.
L 83mm.
Excavated by P J Fowler.

**E25 AWL**
Winchester, Hampshire.
Mid 12th–early 13th century.
Rectangular-sectioned awl, tips lost.
L 98mm.
Goodall 1990-7, fig 53b.330.

**E26 AWL**

Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Rectangular-sectioned awl, one end broken.
L 108mm.
Macdonald and Laing 1974–75, 148, fig 11.19.

**E27 AWL**
Portchester Castle, Hampshire.
11th or 12th century.
Rectangular-sectioned awl. L 112mm.
Hinton 1977, 204, fig 109.64, scale 2:3, not 1:3

**E28 AWL**
Burnham Chapel, Humberside.
*c*1300–1320.
Rectangular-sectioned awl. L 114mm.
Excavated by G Coppack.

**E29 AWL**
Faxton, Northamptonshire.
Site: 12th to 15th century.
Rectangular-sectioned awl. L 114mm.
Excavated by L A S Butler.

**E30 AWL**
Wroughton Copse, Fyfield d own, Wiltshire.
13th century (? mid) to early 14th century.
Diamond-sectioned awl, tip broken.
L 67mm.
Excavated by P J Fowler.

**E31 AWL**
London.
Late 13th to mid 14th century.
Broken, diamond-sectioned awl. L 67mm.
Henig 1974, 195, fig 39.96.

**E32 AWL**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Diamond-sectioned awl. L 91mm.
Goodall 1979c.

**E33 AWL**
Wroughton Cose, Fyfield Down, Wiltshire.
13th century (? mid) to early 14th century.
Diamond-sectioned awl, broken. L 92mm.
Excavated by P J Fowler.

**E34 AWL**
Winchester, Hampshire.
Early 14th century.
Diamond-sectioned awl. L 97mm.
Goodall 1990-7, fig 53b.332.

**E35 AWL**
Cambokeels, Durham.
Later 14th to early 15th century.
Diamond-sectioned awl, broken one end.
L 108mm.
Hildyard 1949, 199, fig 3.20.

**E36 AWL**
St Catharine's Hill, Winchester, Hampshire.
Chapel 12th century to 1538–40.
Diamond-sectioned awl, broken. L 113mm.
Hawkes *et al* 1930, 246, fig 29.12.

**E37 AWL**
Upton, Gloucestershire.
Late 13th to late 14th century.
Rectangular-sectioned shank. L 117mm.
Hilton and Rahtz 1966, 121, fig 14.21.

**E38 AWL**
Cambokeels, Durham.
Late 14th to early 16th century.
Diamond-sectioned awl, damaged at centre, broken both ends. L 132mm.
Hildyard 1949, 199, fig 3.19.

**E39 AWL**
Tullwick, Berkshire.
Site: medieval and early post-medieval.
Diamond-sectioned awl, rounded at point.
L 77mm.

Excavated by Mrs J Naish.

**E40 AWL**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Diamond-sectioned awl, becoming rounded near to broken tip. L 81mm.
Excavated by P J Fowler.

**E41 AWL**
Badby, Northamptonshire.
15th to 16th century and later.
Diamond-sectioned awl, rounded near tip.
L 95mm.
Excavated by Mrs M Gray.

**E42 AWL**
West Hartburn, Durham.
Site: 13th to 16th century.
Diamond-sectioned awl becoming rect-angular at broken end, rounded at other.
L 95mm.
Excavated by L Still.

**E43 AWL**
St Peter's Street, Northampton.
Later 15th century.
Diamond-sectioned awl, one tip broken.
L 104mm.
Goodall *et al* 1979, 273, fig 119.57.

**E44 AWL**
Newbury, Berkshire.
*c*1170 –1200.
Rectangular-sectioned tang with wood graining from former handle. Rest of circular section. L 67mm.
Goodall 1997, fig 19, no. 5.

**E45 AWL**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Rectangular-sectioned tang, circular section blade. L 67mm.
Excavated by P J Fowler.

**E46 AWL**
Winchester, Hampshire.
Late 14th century.
Circular-sectioned awl, tip broken. L 73mm.
Goodall 1990-7, fig 53b.333.

**E47 AWL**
Goltho Manor, Lincolnshire.
Around late 11th century.
Ferrified wood on rectangular section tang.
Awl of rounded section outside handle.
L 90mm.
Goodall 1987, fig 156.28.

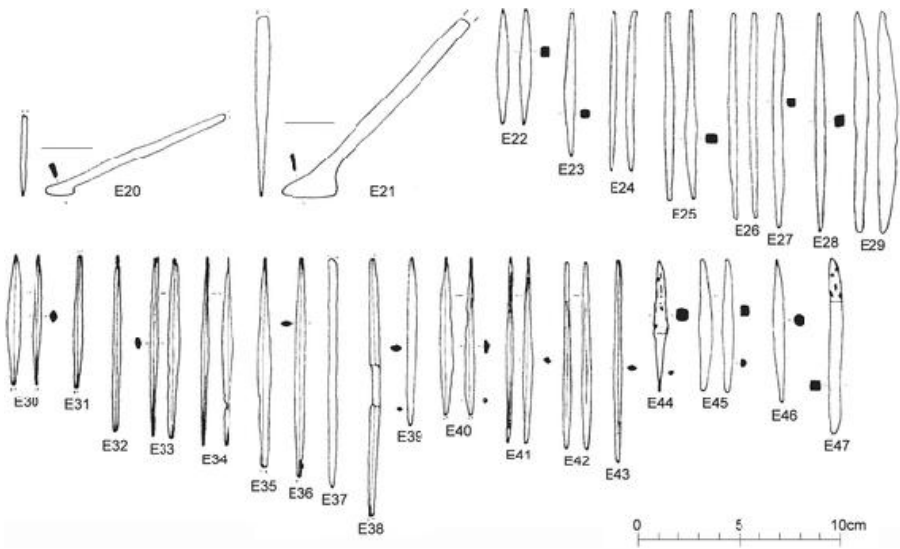



FIGURE 6.2
*Tanning and leatherworking tools: Creasers and awls*

**E48 AWL**
Waltham Abbey, Essex.
*c*1540, with a little later material.
Rounded-sectioned awl in bone handle.
L 121mm.
Huggins 1972, 117, fig 28.2.

**E49 AWL**
Winchester, Hampshire.
Late 13th–early 14th century.

Awl with rectangular-sectioned tang, round blade. L 115mm.
Goodall 1990-7, fig 53b.331.

**E50 AWL**
Lismahon, Co. Down.
Later 13th or 14th century.
Rectangular-sectioned tang, expanded shoulder, circular-sectioned blade. L 102mm.
Waterman 1959a, 162, fig 61.1.

**E51 AWL**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
Rectangular-sectioned awl, expanded shoulder, tips broken. L 102mm.
Goodall 1979a, 118, fig 62.52.

**E52 AWL**
Waltham Abbey, Essex.
*c*1540, with a little later material.
Circular-sectioned awl, tang broken.
L 10mm.
Huggins 1972, 124. From f65.

**E53 AWL**
Durham.
Later 11th to mid 12th century.
Broken rectangular-sectioned awl with expanded central shoulder. L 120mm.
Carver 1979, 17, fig 13.15/1574.

**E54 AWL**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Tanged, circular-sectioned awl. L 115mm.
Goodall 2002, fig 7.3, no. 27.

**E55 AWL**
Netherton, Hampshire.
Medieval.
Rectangular-sectioned tang, expanded shoulder, round blade. L 117mm.
Goodall 1990-28, fig 9.1, no. 49.

**E56 AWL**
London.
?Late 13th to mid 14th century.
Tanged, circular-sectioned awl. L 68mm.
Henig 1974, 191, fig 38.59.

**E57 AWL**
Waltham Abbey, Essex.
*c*1540.
Tanged, circular-sectioned awl. L 94mm.
Huggins 1972, 124. From F64, Building I.

**E58 AWL**
Winchester, Hampshire.
Late 11th–12th century.
Rectangular-sectioned awl. L 104mm.
Goodall 1990-7, 249, no. 329.

**E59 AWL**
Winchester, Hampshire.
14th–15th century.
Rectangular-sectioned awl, curved blade.
L 83mm.
Goodall 1990-7, fig 53b.334.

**E60 NEEDLE**
St Peter's Street, Northampton.
11th century to *c*1410 –20.
Circular-sectioned needle. L 46mm.
Goodall *et al* 1979, 273, fig 119.59.

**E61 NEEDLE**
London.
Late 13th to 14th century.
Circular-sectioned shank. L 58mm.
Henig 1974, 195, fig 39.87.

**E62 NEEDLE**
Upton, Gloucestershire.
Late 13th to late 14th century.
Rectangular-sectioned shank, broken across eye. L 57mm.
Hilton and Rahtz 1966, 102, fig 14.34.

**E63 NEEDLE**
St Catharine's Hill, Winchester, Hampshire.
Chapel site: 12th century to 1538–40.
Circular-sectioned shank, eye and point broken. L 108mm.
Hawkes *et al* 1930, 246, fig 29.127.

**E64 NEEDLE**
London.
Late 13th to mid 14th century.
Circular-sectioned shank, eye broken.
L 132mm.
Henig 1974, 195, no. 88.

**E65 NEEDLE**
Lyveden, Northamptonshire.
15th century.
Eye and circular-sectioned shank broken.
L 50mm.
SF 252, J. For site see Steane and Bryant 1975.

**E66 NEEDLE**
London.
Late 13th to mid 14th century.
Circular-sectioned shank, eye and point broken. L 54mm.
Henig 1974, 195, no. 89.

**E67 NEEDLE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Circular-sectioned shank, tip lost. L 57mm.
Goodall 1977f, iron object fig 2.28.

**E68 NEEDLE**
London.
Late 13th to mid 14th century.
Circular-sectioned shank. L 73mm.
Henig 1974, 195, no. 91.

**E69 NEEDLE**
Grenstein, Norfolk.
Late 14th or possibly early 15th century.
Circular-sectioned shank, eye and tip broken. L 63mm.

Goodall 1980c, fig 77, no. 21.

**E70 NEEDLE**
London.
Late 13th to mid 14th century.
Circular-sectioned shank. L 86mm.
Henig 1974, 195, fig 39.86.

**E71 NEEDLE**
Maison Dieu, Ospringe, Kent.
*c*1270 to 1483.
Rectangular-sectioned shank, eye and tip broken. L 94mm.
Goodall 1979c.

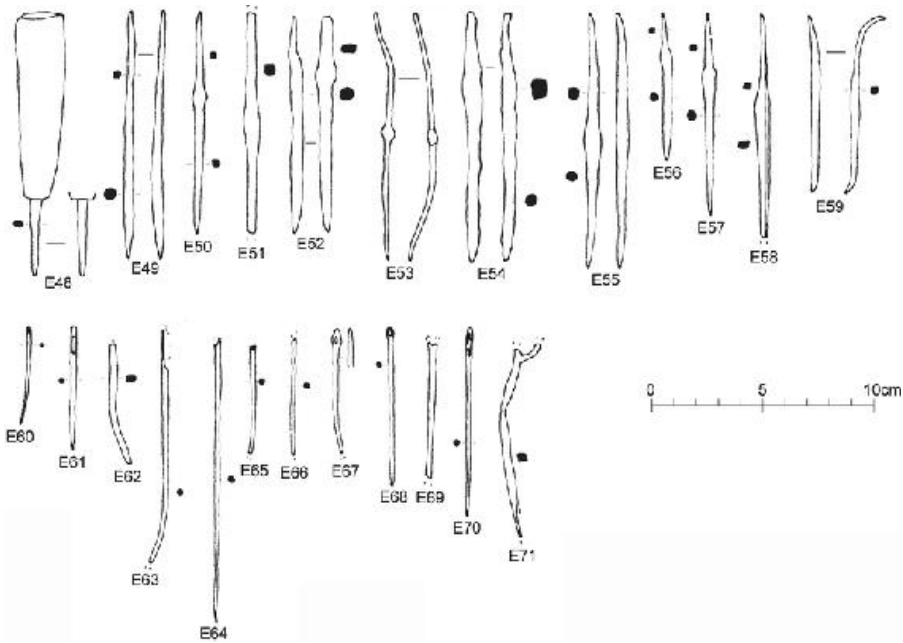



FIGURE 6.3
*Tanning and leatherworking tools: Awls and needles*

**E72 NEEDLE**
King's Lynn, Norfolk.
*c*1250–1350.
Circular-sectioned shank. L 171mm.
Goodall and Carter 1977, 295, fig 134.40.

**E73 NEEDLE**
Llantrithyd, South Glamorgan.

Early to mid 12th century.
Broken, circular-sectioned shank. L 61mm.
Goodall 1977f, 47, iron object fig 2.29.

**E74 NEEDLE**
St Peter's Street, Northampton.
15th century.
Diamond-sectioned shank becoming circular. L 85mm.
Goodall *et al* 1979, 273, fig 119.58.

**E75 NEEDLE**
London.
?Late 13th to mid 14th century.
Part-forged needle. Shank of circular section becoming triangular towards point. Head flattened but eye not yet punched. L 139mm.
Henig 1974, 195, fig 39.92.

**E76 NEEDLE**
London.
Late 13th to mid 14th century.
Circular-sectioned shank becoming tri-angular towards tip. L 128mm.
Henig 1974, 195, fig 39.85.

**E77 NEEDLE**
London.
Around later 14th century.
Circular-sectioned shank becoming tri-angular, point broken. L 114mm.
Henig 1974, 195, fig 39.84.

**E78 NEEDLE**
London.
?Late 13th to mid 14th century.
Circular-sectioned shank, triangular towards point, L 159mm.
Henig 1974, 195, fig 39.90.

**E79 NEEDLE**
London.
Late 13th to mid 14th century.
Circular-sectioned shank, triangular at point. Eye lost. L 72mm.
Henig 1974, 195, no. 94.

**E80 NEEDLE**

Brooklands, Weybridge, Surrey.
*c*1150 to 1325.
Broken shank, partly triangular in section, rest corroded. L 51mm.
Goodall 1977d, 73, fig 45.16.

**E81 STILETTO**
Grenstein, Norfolk.
Late 14th or possibly early 15th century.
Circular-sectioned shank with rectangular hole, iron riveted handle and end cap.
L 134mm.
Goodall 1980c, fig 77, no. 20.

**E82 STILETTO**
Pleshey Castle, Essex.
Early to mid 16th century destruction.
Circular-sectioned shank with shaped terminal and wooden handle with three copper-alloy rivets. L 126mm.
Williams 1977, 176, fig 38.14.

**E83 STILETTO**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
Rounded rectangular-sectioned shank with moulded cap and former riveted handle.
L 171mm.
Goodall 1979a, 123, fig 64.104.

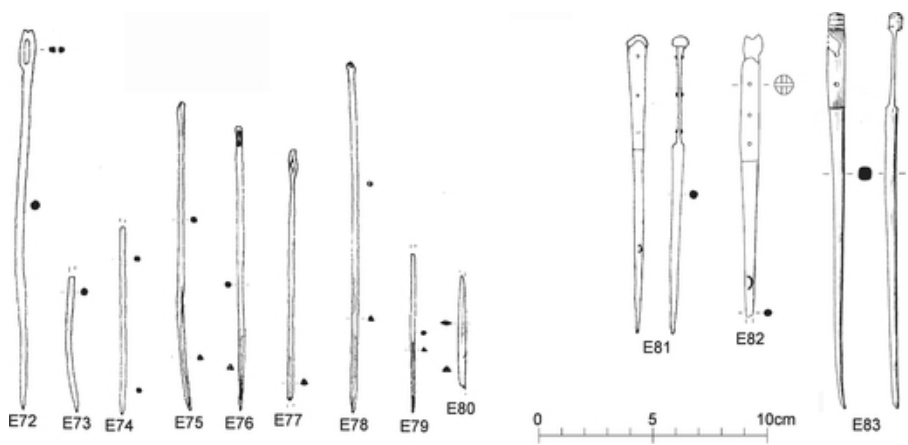



FIGURE 6.4
*Tanning and leatherworking tools: Needles and stilettos*

# 7
# Agricultural Tools

## 7.1 Ploughs

Ploughs are illustrated in a number of medieval manuscripts and mentioned in agricultural treatises and manorial accounts, but they are less well represented as archaeological finds. Illustrations, which show them in differing degrees of detail, include that in the 11th-century Caedmon manuscript (Higgs 1965, 7, pl 11a), and one in a mid 12th-century manuscript (Hartley and Elliott 1931, pl 7c). A late 13th-century diagram in the cartulary of the Cistercian nunnery of Nun Cotham in Humberside (Lincolnshire) has the individual parts named (Colvin 1953; original reproduced in Higgs 1965, 7, pl 11b). Two early 14th-century representations occur in the Holkham Bible (Hassall 1954, 68–69, f 6) and the Luttrell Psalter (Hartley and Elliott 1928, pl 24d).

The medieval plough was of wood, with iron restricted to the coulter, ploughshare, and chains and associated fittings used to attach it to the plough team. The share beam and stilt of an oak plough are known from Waltham Abbey, Essex, where they were deposited in a ditch between about 1450 and 1500 (Huggins 1972, 116–117, fig 27, pl 3D). The plough evidently differed in some details from those shown in earlier medieval representations, although it closely resembles one in a 15th-century Danish mural (Huggins 1972, 116–117).

### Coulters

The coulter, a heavy knife-like blade fixed vertically in the beam of a plough, cut a furrow slice in front of the ploughshare. Illustrations show long iron coulters with deep blades and thick shanks projecting through the beam and often wedged in place. No firmly dated medieval coulters are known, although **F1–2** from London are possibly of this date.

### Ploughshares

The tip of the share beam was protected from wear by an iron ploughshare which undercut the slice made in the ground by the coulter and created a furrow. Late Saxon flanged ploughshares with triangular blades are known from St Neots, Cambridgeshire (Addyman 1973, 94, fig 19.30) and other sites. **F3–5** are incomplete medieval ploughshares, all flanged.

## 7.2 Spades

Medieval spades were commonly of wood with an iron edging to the blade to prevent wear, although examples with blades entirely of wood or iron are known. The spade-iron is sometimes specified in documents, as at Canterbury in 1277 when 3 'spadetres' and 9 'soueltrowes' (shovel trees) were bought as well as 2 'spadhisenes' and 4 'souelhisenes' (Salzman 1967, 330). Spades also frequently appear in medieval illuminated manuscripts (Hassall 1970), where they are generally shown with an iron edging on a symmetrical or asymmetrical blade. The symmetrical blade has two shoulders of equal width cut straight across or sloping, whereas the asymmetrical blade has a single shoulder which is normally cut straight across. Straight-shouldered spades are well adapted for digging, but those with rounded or sloping shoulders should perhaps be regarded as shovels used with arm rather than foot pressure (Figure 7.1).

Archaeological excavations have produced a number of wooden spades, some with blade and shaft made in on piece, others with the two separate. A spade and shovel from a probable late 11th-century pit at Pevensey Castle, East Sussex (Dunning 1958, 215–216, fig 6), a shovel from the packing of a 13th-century timber-lined well at Loppington, Shropshire (Rowleys House Museum, Shrewsbury), and a spade from the edge of a medieval ditch at Chester (Anon 1953), all have shaft and blade in one, the Chester spade having a T-shaped handle and the others, probably incomplete, no hand-grip at all. Wooden shovel blades with holes and pegs to secure separate, lost shafts come from a 12th to 13th-century well at Duffield Castle, Derbyshire (Cox 1887, 161) and from mid 12th to mid 14th-century levels at King's Lynn, Norfolk (Carter 1977, 373, fig 173, 81–82). All these spades and shovels have asymmetrical blades, the Pevensey Castle and Chester spades straight shoulders and rectangular and triangular blades respectively. None of the blades bears any trace of a spade-iron, although this does not exclude their former existence since some appear to have been shrunk rather than nailed into place. Wooden-bladed spades and shovels were, however, used for handling grain for malting and for mixing

mortar. Six 'bare shofelles for the playsterers to make morter with' were bought at Windsor in 1533, and similar entries occur in many earlier accounts (Salzman 1967, 338). Illustrations showing plain wooden shovels being used to mix mortar are also not uncommon (Salzman 1967, pls 6b, 19).

Spade-irons are known from a number of sites, and **F6 –17** are classified according to their form, shape, and means of attachment to the wooden blade. They fall into three types: with triangular mouths (Type 1), round mouths (Type 2) and straight mouths (Type 3).

## Type 1: Triangular-mouthed spade-irons

The spade-iron is grooved throughout to receive the sides of the wooden blade and is of the same width throughout, thereby creating a triangular blade edge. **F6** is of this type and is apparently complete. No nail-holes are recorded, and it was probably shrunk into place on the wooden blade.

## Type 2: Round-mouthed spade-irons

These may be sub-divided into three groups (A–C):

— Type 2A: The spade-iron is grooved throughout to receive the sides of the wooden blade. **F7** is of a similar width throughout, although the rounded blade edge is worn.

— Type 2B: The spade-iron is grooved throughout to receive the sides of the wooden blade, but the base is deepened to produce a triangular-shaped blade edge. The tip of **F8** is shallow in comparison with those of **F9–10**, and it also has a comparatively shallow groove which was evidently insufficient to keep the blade and spade-iron securely together since a clip has been inserted through the spade-iron to bind it to the blade. None of the examples has any nail-holes, and they were evidently shrunk into position.

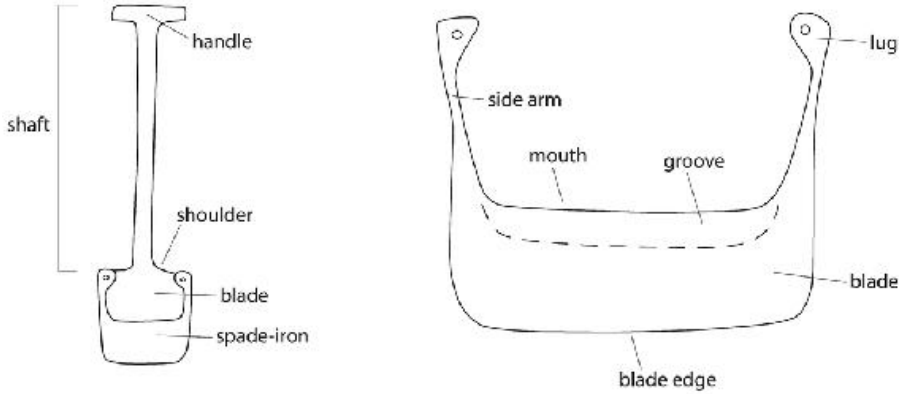



FIGURE 7.1
*Spades: terminology*

— Type 2C:The spade-iron has a rounded mouth with a groove which only runs a short distance up the side which then becomes a flat, straight side arm. **F11** is of this type, but it is insufficiently complete for the precise method of attachment to be known.

## Type 3: Straight-mouthed spade-irons

The base of the mouth is grooved and the spade-iron has flat, straight side arms and a rectangular blade. **F12–15** are examples of the type, but only **F15** has complete side arms terminating in lugs which gripped the blade and were nailed through it from front to back. The corners of all the blades are rounded, probably in large part through wear. **F16 –17** are fragmentary straight-mouthed spade-irons.

## Discussion

Spade-irons **F6–17** and the wooden spades and shovels are too few in number for many conclusions to be drawn, although it is of interest that the chronological range of the various forms represented in manuscripts (Hassall 1970) coincides well with that of the actual objects. Triangular or roughly triangular spade blades are depicted throughout the medieval period, as the spade-irons confirm, but rectangular-shaped blades, shown less commonly in early medieval manuscripts, occur mainly in 14th-century and later contexts. The more complete spade-irons come from flat-bladed spades with blades between 160 and 260mm in width.

The triangular and round-mouthed spade-irons seem to have been shrunk onto the wooden blades, since none has any sign of a nail-hole. A weakness in this method is indicated by the need to repair the Lydford Castle spade, **F8**. Representations do, however, clearly indicate that some were nailed in place, and not necessarily through specially formed lugs (Hassall 1970, fig 1e–f). Straight-mouthed spade-irons with only a grooved base cannot have been shrunk into position, and this type must normally have had nailed lugs terminating the side arms. An alternative method of attachment would have been for the side arms to turn over and run along the top or shoulder of the blade, but illustrations do not seem to show such a method.

Spades and shovels were used for a variety of purposes, including cultivation, clearing overburden and waste from quarries, digging pits, ditches and building foundations, and moving fuel and ashes. The find-spots of the medieval spades and spade-irons are therefore of some interest. The Pevensey Castle objects seem to have been used in connection with storage in the pit in which they were found, and the Chester spade may have been used to dig or maintain a ditch. The Loppington spade and four spade-irons **F8**, **F10**, **F12** and **F16** however, come from wells or their construction pits.

## 7.3 Shovels with Iron Blades

Shovels with iron-edged wooden blades have been discussed above, but some with entirely iron blades also existed. The two types must at times have been used alongside each other, but those with metal blades will have been used for work which involved great heat. **F18** was found on the hearth of a glass kiln, and on such a site it may have been used for such purposes as lifting vessels when hot, filling crucibles, and shovelling out the ashes of kilns. Similar shovels might have found a use in other trades, including those of the potter and tiler.

## 7.4 Forks

**F19–20** are socketed garden forks with three prongs. Such tools are rarely shown in illustrations or mentioned in documents, and they were clearly in much less common use than spades and shovels. They are most likely to have been used in gardens, although **F19** was apparently lost while cleaning out a

garderobe.

A three-pronged fork with a perforated tang from The Mounts, Pachesham (Surrey) is probably of recent date (Lowther 1948, 7, pl A; ex inf A W G Lowther).

## 7.5 Turf Cutters

Turf cutters were used during excavation and earthmoving as well as in gardening. The moat at Weoley Castle was dug between about 1270 and 1280 and the material spread over the interior, raising its level by 0.9 to 1.2m. **F21**, from the bottom puddled clay layer of the moat, must have been used during its excavation to cut blocks of turf before they were lifted with a shovel or spade. It is anchor-shaped with a crescentic blade and central socket which retains part of the original wooden handle. **F22–23** may be less complete turf cutters, the former in particular perhaps a gardener's tool.

## 7.6 Hoes

Medieval hoes **F24–29** are both socketed and tanged, those with tangs having them set at right angles to the blade. All have triangular blades except **F29**, which is rectangular with curved shoulders, and all but **F26**, which is gently curved, have straight blade edges.

Socketed hoes **F24–25** were probably used in gardening for weeding and breaking up the surface of the soil, whereas the tanged hoes **F26–28** and **F29** are more likely to have been used for other purposes. At Vale Royal in 1278 'labourers with spades and hoes clearing [the earth] in various quarries' are mentioned, and an illustration of about 1450 shows a workman mixing mortar with a triangular hoe, perhaps socketed, set at an angle on the end of a long handle (Salzman 1967, 126, pl 1). **F26**, from its find-spot, was clearly used for clearing out a garderobe.

One or other of the socketed hoes **F24–25** may have fitted onto the end of a shepherd's stave. Illuminated manuscripts show shepherds carrying houlettes, long straight staffs with an iron spud at one end used to pick up a clod of earth and throw it close to a sheep to drive it back to the flock (Salzman 1957, 92–93).

## 7.7 Rakes and Harrows

Illustrations in medieval manuscripts show hand rakes in use during threshing and gathering corn together in the field (Hartley and Elliot 1931, pl 1, 86), and also the harrowing of fields with horse-drawn harrows (Hartley and Elliot 1928, pl 23b). These rakes and harrows, like those used in gardening to level dug ground, must often have been made entirely of wood, but **F30–35** are rake and harrow teeth with the characteristic long taper to the base and short taper to a clenched tang tip. The length of the tang indicates the thickness of the back of the rake or frame of the harrow. It is impossible to distinguish large rake from small harrow teeth, but perhaps **F35** is the only near certain harrow tooth.

## 7.8 Billhooks

The billhook is a tool used for forearm chopping with short cutting actions, unlike the swinging movement used with an axe, and it was employed for coppicing, lopping the stems and branches of young trees, and for laying hedges. Many regional varieties exist today (Salaman 1975, 75, fig 108), but the range was probably not as wide during the medieval period.

**F36** is a type of billhook known as a hedge-bill or a slasher which is today set on a long handle and used to clear brambles. The bevelled back of **F36** must have effectively given it two cutting edges, one stouter than the other and capable of heavier work. **F37**, which has a flanged and nailed socket and straight-ended blade, may also be a slasher. **F38–39** are much larger, however, and both have nailed, flanged sockets with closed bases which allowed handles to be very firmly attached. The hooked blade backs were probably used to spike and gather the next pieces of wood required for chopping, and the bevelling of the blade end of **F39** imply that is was also used with a pushing action. These longer billhooks were probably used to trim the posts and rails of wattle and gate hurdles and to split hazel rods (Jenkins 1965, 22–23, fig 5, pls 29 and 71). Thin branches were probably trimmed with billhooks with more strongly curved blades (Jenkins 1965, pl 31).

Billhooks are shown in use for coppicing in a manuscript of about 1500 (Higgs 1965, 8, pl 13b), and all have short wooden handles and curved blades without hooked backs. The axe-like projection from the backs of some billhooks in illuminated manuscripts (Higgs 1965, 8, pl 17b; Hartley and Elliot 1928, pl 21b) is unmatched on any extant blade.

# 7.9 Weedhooks

Weeds were a continuing hazard to medieval crops, particularly in the open field where strips in the hands of a careless husbandman could spread weeds to those of others. Weeding was undertaken with a weedhook and crotch, the latter a long wooden stick forked at one end and used to hold the weed in place while its stalk was being cut. Labours of the Month frequently depict weeding, and that for June in a late 14th-century calendar (Higgs 1965, 8, pl 15a) shows a man cutting a thistle with these two tools, the weedhook hafted on a long plain wooden handle. The scene is repeated in countless manuscripts.

The major weeds to be removed were 'thystles', 'dockes', 'cockledrake' or corn-cockle which was poisonous to stock, and 'gouldes', presumably marigolds (Hellier and Moorhouse 1978, 10). Weeding of the cereal crop began in late May or early June, but thistles were not cut until July since, if cut earlier, each root would throw up three or four plants, and if cut later their seed would already have disappeared (Anstee 1970–72, 114–115).

Medieval weedhooks **F40–63** have been classified according to method of hafting and blade form. The letters signify the same blade shape, irrespective of haft.

## Type 1: Tanged weedhooks

These may be sub-divided into four groups (A–D): — Type 1A: Weedhooks **F40–50** have crescent-shaped blades which are commonly evenly curved, as are **F43** and **F46**, but which can be more strongly recurved, as are **F40** and **F45**. The cutting edge runs round the inner side of the blade, often extending some ways towards the tang as on **F42** and **F50**, and more extremely on **F45**, thereby producing a longer and more efficient cutting edge. The tangs, where complete, are generally clenched, a necessary safeguard on a tool which was pulled.

— Type 1B: **F51** has a half-moon blade with curved outer edge and straight cutting edge. The tang is broken.

— Type 1C: **F52–53** are weedhooks with wedge-shaped blades which have almost straight cutting edges and partly straight backs. Both have plain tangs, one probably incomplete.

— Type 1D: Weedhooks **F54–55** have triangular blades with straight or near straight cutting edges. **F55** has a clenched tang tip, and the handle was further

secured by a coiled iron collar which bound it and the tang tightly together.

**F56** is too incomplete a fragment to classify with certainty beyond suggesting it could be Type 1B, C or D.

## Type 2: Tanged and flanged weedhooks

These may be sub-divided into four groups (A–D):

— Type 2A: **F57** has a strongly recurved crescent-shaped blade and a near complete tang with flanges which gripped the shaft of the wooden handle.

— Type 2B: The half-moon blade of **F58** is complete, that of **F59** less so, but both have flanged and clenched tangs.

— Type 2C: Weedhooks **F60–61** have wedge-shaped blades with straight cutting edges and a partly straight back. The tang of **F60** is flanged and clenched, that of **F61** broken but nailed through the flanged section.

— Type 2D: **F62** has a triangular blade and incomplete nailed and flanged tang.

## Type 3: Socketed weedhooks

Few examples of this type are known.

— Type 3D. **F63** has a wedge-shaped blade and broken, nailed socket.

## Discussion

The most numerous type of weedhook (**F40–56**) has a simple tang, although some (**F57–62**) have additional flanges to secure them more firmly to the wooden handle. **F63** is the only socketed weedhook. The weedhook was used with a vigorous pulling action, and it is not surprising that many of the more complete tangs have clenched tips, including some of those with flanged tangs. **F61** and **F63** had nailed handles. The majority of weedhooks are from 12th to 14th-century contexts, and it would seem that during the late medieval period the tanged handle lost ground to that with additional flanges.

Anstee (1970–72, 114) comments that in the Queen Mary Psalter the weedhooks are shown cutting the weeds above the ground, and suggests that it

is reasonably certain that, as in later times, they were cut just below the surface. Such representations are usual, however, and may be no more than an artistic convention which enabled the iron blade to be shown. It is also possible that in certain cases the ground was too hard for the blade to penetrate.

Blade shapes are of some significance in relation to their method of use and to what they could cut. Some of the crescent-shaped blades, which are the most numerous type, are probably too slender to push into the ground, and they may have been used for surface cutting of weeds. The other blade forms are stouter and will have entered the ground easily. The broad backs of the half-moon blades, and near straight backs of the wedge-shaped blades, may have been used occasionally with a pushing action like a spud to cut the stems of certain weeds. The shape and width of the cutting edges determined which weeds were cut, some of the recurved crescent-shaped blades being too narrow for the thick stems of thistles.

A number of the weedhooks may also have been used as pruning hooks, especially for removing buds or suckers from plants not easily reached with a knife. It is better, however, to classify **F40–63** as weedhooks rather than pruning hooks.

## 7.10 Reaping Hooks

Reaping hooks, used with a forearm swing in a similar way to the billhook, have curved blades with their edges lying entirely to one side of the handle, unlike the sickle with its curved back blade.

Medieval reaping hooks are either tanged or socketed, and **F64–66** have the stubs of narrow, concave blades developing without shoulders from the tang. The cutting edge of **F64** broadens out as it leaves the tang, whereas on **F65–66** blade and tang continue in a smooth curve. **F67–69** are socketed reaping hooks, **F67** the most complete with a strong concave blade. **F68–69** retain little more than the short socket and stub of a blade.

## 7.11 Sickles

Sickles were used for harvesting cereal crops, and medieval illustrations frequently show them in use, but they rarely survive in anything like complete form and are mainly represented by blade or blade and tang fragments. Two

main types, classified according to the shape of the blade and its relation to the tang, can nevertheless be isolated. All have balanced blades, several of which are filled to form fine teeth.

— Type 1: The blade, generally comparatively narrow for the size of the sickle, curves fairly sharply away from the end of the tang before straightening out. **F70–82** are variously incomplete blade and tang fragments. None of the few complete tangs has a clenched tip, and the blades are commonly triangular in section. The only sickle with a thickened back rib, **F76**, is not certainly medieval. **F71** has a stamped mark on the front of the blade close to the tang, and is filed on the underside to form fine teeth. No filling has been observed on the other blades, although corrosion may in some case obscure or have removed it. The cutting edge on most blades begins at or close to the angle between tang and blade, and few have a rectangular sectioned length at the base of the blade.

— Type 2: The blade, which is broad and rises from a short rectangular sectioned stem set next to the angle with the tang, is at first gently curved and almost in line with the handle before its curvature increases. **F83–95** were found bundled together in the same context as an axe, spearhead, shears, pitchfork and three sickle blade fragments **F105–107**. **F96** is another example of the type of sickle, but from a different site.

## Sickle blades

**F97–104** are sickle blade fragments which include the tip, and all are fairly narrow and may come from Type 1 sickles. **F97–99** and **F102** all have flattened tips of rectangular section which were presumably intended to be stronger and less liable to distortion than the more slender, tapering tips of the other examples. **F100–101** have cutting edges with filed undersides. **F105–112** are curved sickle blade fragments, **F105–107** found with Type 2 sickles **F83–95** and presumably of that type. The others are more slender and maybe from Type 1 sickles.

## Discussion

Medieval sickles all have balanced blades almost invariably of simple triangular section with tapering or flattened tips. The cutting edge is sometimes filed on the underside to produce a sharp and sometimes toothed

edge which would have sawn the stalks being cut as the sickle was pulled towards the user. Illustrations most frequently show the reaper cutting the stalks quite low down, where they were firmer (Higgs 1965, 9, pl 18 b–c).

## 7.12 Scythes

Medieval illustrations often show scythes in use in haymaking, but they were also used for mowing grass, and documents mention their use for mowing barley, oats, rye, peas and beans. The scythes are depicted with long handles with pairs of handgrips and long, gently curved iron blades (Higgs 1965, 8–9, pls 17a–b, 18a and 19a).

**F113–118** are scythes, **F115** perhaps post-medieval. **F113**, complete but for the centre of the blade lost in modern disturbance, has a straight parallel-sided blade with a back which curved gently to the tip and a short clenched tang at right angles to it. The blade is of triangular section, but on **F113** and **F115** it has a thickened back rib. **F114** is a blade fragment with parallel sides and then a curved back, and **F115** is gently curved throughout. **F116–118** are blade tips, **F116** certainly from a scythe, the others possibly from large pairs of shears.

## 7.13 Pitchforks

Medieval pitchforks **F119–127** are tanged and have pairs of tines which are either straight or curved in side view. No socketed pitchfork, as depicted in a 12th-century chronicle, is known (Higgs 1965, 8, pl 17a). Pitchforks were used to move bound sheaves of corn and bundles of hay, thatching straw, reeds, etc about, and their size varies according to use. The tines are of circular, rectangular and diamond section, and complete tangs taper to a point and are never clenched. **F126–127**, which are of large size, may be hayforks.

## 7.14 Spuds

Spuds are hafted iron blades of varying shapes and sizes which were used to clean earth from ploughs and digging tools and in weeding. **F128–130** are tanged spuds with flat, rectangular blades and rounded shoulders.

## 7.15 Ox Goads

Ploughing scenes in medieval manuscripts often show the ploughman or his assistant encouraging the team along with a whip or a long stick (Hartley and Elliot 1931, pl 7c; 1928, pl 24d). The stick was sometimes made more useful by the addition of an iron goad similar to **F131–133**.

## 7.16 Bells

Bells **F134–138** are probably sheep or cow bells, all made of sheet iron with their handles and clapper supports either combined (**F134–135**) or separate (**F138**). The latter is a sophisticated arrangement since both the clapper and its swivel loop support must have moved independently. None of these bells retains its clapper, but **F139–145** are examples of these, all with hooked suspension loops. **F139–140** are small enough to have been used with bells such as **F134**, **F136** and **F138**, but the others must have come from larger bells. **F143–145** are all of identical length, 135mm, and may be from portable ecclesiastical bells of a type known in Ireland (Coffey 1909, 47–48, 65–67, figs 51, 64–65).

The sheet iron bells were probably made from single pieces of iron forged into shape and brazed together down the side seams. The overall copper-alloy plating noted on **F134**, **F136** and **F138** probably derives from lavishly used brazing metal, and it would have protected the bells from rusting and thus prevented them staining the wool of the sheep. A late 13th-century bestiary shows a small flock of sheep led by a bell-wether (Higgs 1965, 7, pl 9b).

**F1 COULTER**
London.
Medieval (?).
Gently curved rectangular shank, triangular section blade. L 650mm.
Ward Perkins 1967, 124, pl XXII.1.

**F2 COULTER**
London.
Medieval (?).
Gently curved rectangular shank, triangular section blade. L 690mm.
Ward Perkins 1967, 124, pl XXII.2.

**F3 PLOUGHSHARE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th century (?).
Incomplete flanged ploughshare with thickened base. L 161mm.
Excavated by P J Fowler.

**F4 PLOUGHSHARE**
Huish, Wiltshire.
12th to mid 15th century.
Incomplete flanged ploughshare. L 105mm.
Shortt 1972, 124, fig 6.48.

**F5 PLOUGHSHARE (?)**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Incomplete flanged ploughshare. L 72mm.
Goodall 2002, fig 7.3, no. 30.

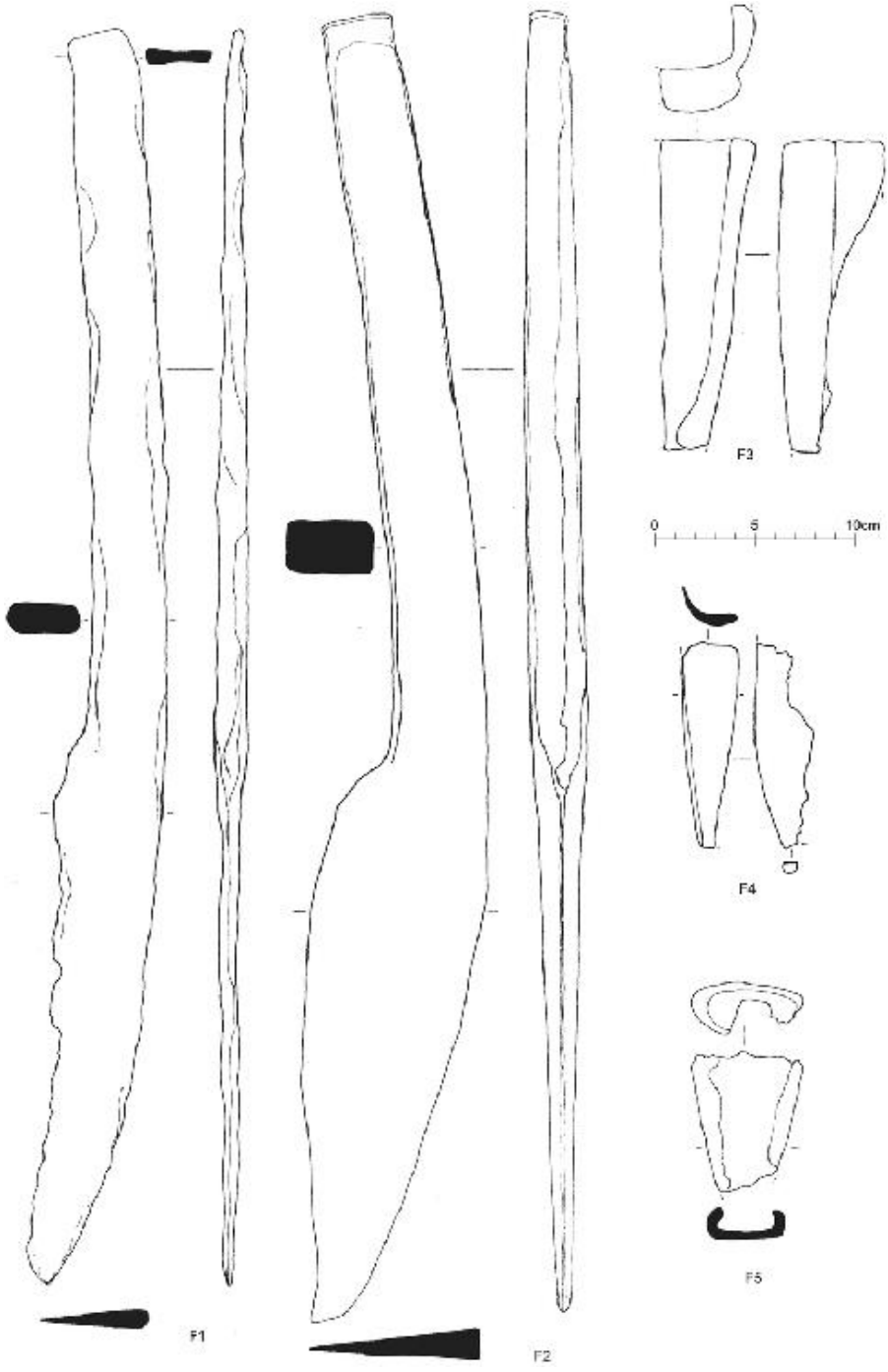



FIGURE 7.2
*Agricultural tools: Coulters and ploughshares*

**F6 SPADE-IRON**

Chew Valley Lake, Somerset.
13th century or later.
Triangular mouth and blade edge, grooved throughout. W 208mm.
Rahtz and Greenfield 1977, 326, fig 121.9.

**F7 SPADE-IRON**
Thetford, Norfolk.
11th century (?medieval or post-medieval disturbance).
Round mouth and blade edge with straight sides grooved throughout. W 143mm.
Goodall 1984.

**F8 SPADE-IRON**
Lydford Castle, Devon.
Mid 13th century, from infill of well.
Round mouth, grooved throughout.
Triangular blade. Iron clip through blade represents a repair intended to secure wooden blade and spade-iron more firmly.
W 240mm.
Goodall 1980b, fig 18.3.

**F9 SPADE-IRON**
Netherton, Hampshire.
Mid 13th century.
Round mouth, grooved throughout. Deep triangular blade. W 221mm.
Goodall 1990-28, fig 9.2 no. 72.

**F10 SPADE-IRON**
Steyning, West Sussex.
*c*1450 to 1500. From tipping infilling well 1.
Round mouth, grooved throughout. Deep triangular blade. W 191mm.
Excavated by Miss J Evans.

**F11 SPADE-IRON**
Bishops Waltham, Hampshire.
1450 to 1500.
Rectangular mouth with groove along edge and in lower part of side arms. Upper part of most complete side arm flat and straight. W 162mm.
Lewis 1985, fig 23.8.

**F12 SPADE-IRON**
Lyveden, Northamptonshire.

From construction pit of well dug and in use *c*1200 to 1350.

Incomplete rectangular mouth with grooved edge and broken straight, flat side arm.

Rectangular blade, slightly rounded corner.

W 104mm.

Steane and Bryant 1975, 139, fig 52.251.

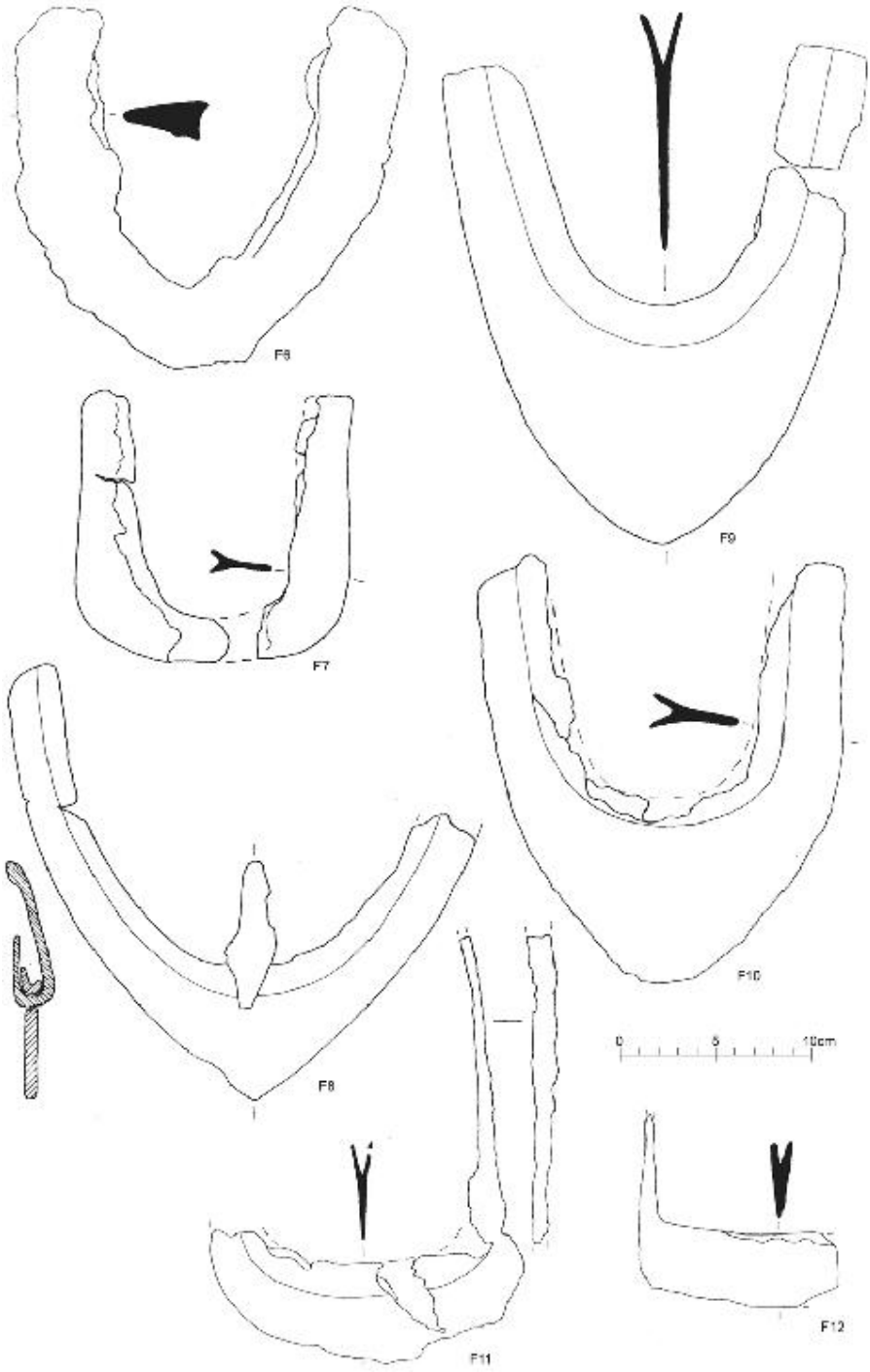



FIGURE 7.3
*Agricultural tools: Spade-irons*

**F13 SPADE-IRON**

Northolt Manor, Greater London.
First half 14th century.
Rectangular mouth with grooved edge and incomplete straight, flat side arms.
Rectangular blade with rounded corners.
Blade W 202mm.
Excavated by J G Hurst.

**F14 SPADE-IRON**
Badby, Northamptonshire.
15th to 16th century and later.
Incomplete rectangular mouth with grooved edge and base of flat side arm. Rectangular blade with worn corner. W 127mm.
Excavated by Mrs M Gray.

**F15 SPADE-IRON**
Tattershall College, Lincolnshire.
1540–*c*1560.
Rectangular mouth with grooved edge and flat side arms, originally straight but now distorted, ending in nailed lugs. Rectangular blade with rounded corners. Blade W 180mm.
Excavated by L J Keen.

**F16 SPADE-IRON**
Lyveden, Northamptonshire.
From construction pit of well dug and in use *c*1200 to 1350.
Fragment with grooved edge from spade-iron with rectangular mouth and blade.
W 114mm.
Steane and Bryant 1975, 139, fig 52.250.

**F17 SPADE-IRON**
Grenstein, Norfolk.
Late 14th or possible early 15th century.
Fragment with grooved edge from spade-iron with rectangular mouth and blade.
W 86mm.
Goodall 1980c.

**F18 SHOVEL**
Blunden's w ood, Hambledon, Surrey.
Later 13th, early 14th century. Found on eastern hearth of glass kiln A.

Incomplete and distorted iron shovel blade.
25mm length close to broken end of one edge is rolled over and apparently once projected up or away from main blade.
W 136mm.
Wood 1965, 72–74, fig 10.

**F19 FORK**
The o ld Manor, Askett, Buckinghamshire.
1475 to 1515. From garderobe.
Socketed fork with three prongs. L 323mm
Beresford 1971, 366, fig 22.

**F20 FORK**
Badby, Northamptonshire.
15th to 16th century and later.
Socketed fork with three prongs. L 360mm.
Excavated by Mrs M Gray.

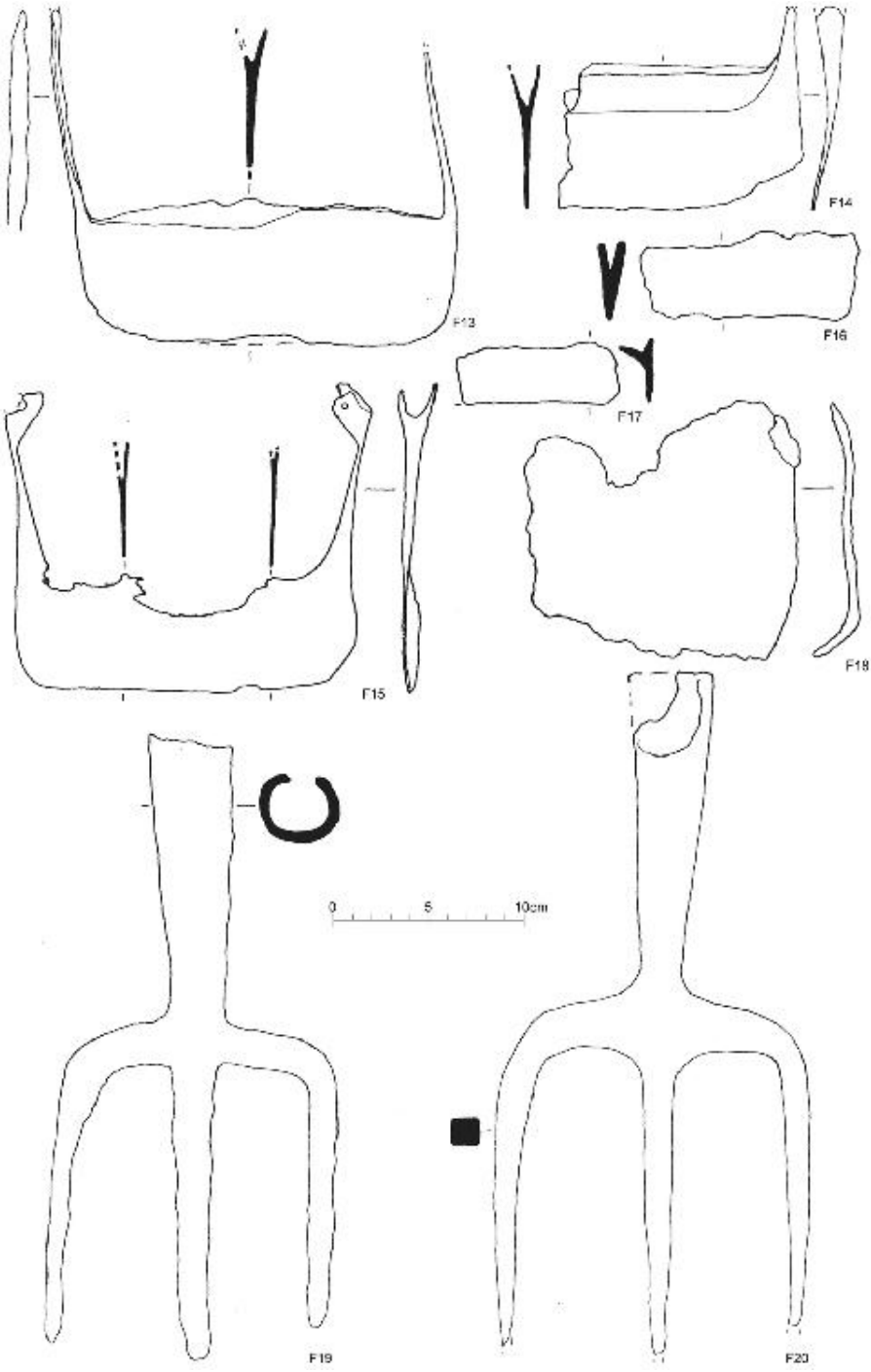



FIGURE 7.4
*Agricultural tools: Spade-irons, shovel and forks*

**F21 TURF CUTTER**

Weoley Castle, Birmingham, West Midlands.
From bottom puddled-clay layer of moat, dug *c*1270–80.
Crescent-shaped blade with central socket retaining traces of wooden handle.
W 132mm.
Taylor 1974. For site see Oswald 1962.

**F22 TURF CUTTER**
Huish, Wiltshire.
12th to mid 15th century.
Crescent-shaped blade, broken shank which may have developed into socket. W 69mm.
Shortt 1972, 120, fig 5.35.

**F23 TURF CUTTER (?)**
Hen Caerwys, Clwyd.
*c*1450 to 1520.
Flanged socket, incomplete blade. L 107mm.
Excavated by G B Leach.

**F24 HOE**
Upton, Gloucestershire.
Mid to later 13th century.
Triangular blade, long socket with hole for nail. L 188mm.
Rahtz 1969a, 108, fig 12.87.

**F25 HOE**
Hampton Wafer, Hereford and Worcester.
Site: probably 11th to early 14th century.
Triangular blade, curved edge, damaged socket. L 116mm.
Stanford 1967, 87, fig 7.6.

**F26 HOE**
Brandon Castle, Warwickshire.
From garderobe of keep of 1226–66.
Damaged triangular blade set at right angles to broken tang. W 109mm.
Chatwin 1955, 81, fig 11.17.

**F27 HOE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Incomplete triangular blade set at right angle to broken broad tang. W

63mm.
Macdonald and Laing 1974–75, 148, fig 11.16.

**F28 HOE**
Winchester, Hampshire.
?Mid 15th century.
Incomplete triangular blade at right angles to broken tang. W 145mm.
Goodall 1990-11, fig 108.907.

**F29 HOE** (not illustrated)
Norwich, Norfolk.
In 1507 fire deposit.
Rectangular blade with curved shoulders set at right angles to tang which broadens out near tip. L 190mm, blade W 200mm.
Goodall 1993g.

**F30 RAKE TOOTH**
Broadfield, Hertfordshire.
*c*1220 to *c*1450.
Tapering rectangular-sectioned tooth, clenched tang tip. L 115mm.
Goodall 1974b, 56, fig 22.6.

**F31 RAKE TOOTH**
Copt Hay, Tetsworth, Oxfordshire.
13th century.
Tapering rectangular-sectioned tooth, tang broken. L 116mm.
Robinson 1973, 101, fig 23.10.

**F32 RAKE TOOTH**
Brixworth, Northamptonshire.
Saxon to mid 15th century.
Curved, tapering rectangular section, probably broken across blade of tang.
L 98mm.
Goodall 1977g, 94, fig 9.9.

**F33 RAKE TOOTH**
Lyveden, Northamptonshire.
First half 15th century.
Tapering rectangular-sectioned tooth with clenched tip to tang. L 114mm.
Steane and Bryant 1975, 121, fig 46.33.

**F34 RAKE TOOTH**
Winchester, Hampshire.
15th–?16th century.
Tapering rectangular-sectioned tooth, tang broken. L 115mm.
Goodall 1990-11, fig 108.908 [Goodall 1980 says WP3008].

**F35 HARROW TOOTH**
Portchester Castle, Hampshire.
Immediately prior to construction of building between 1521 and 1527.
Rectangular-sectioned tooth, tang broken.
L 178mm.
Hinton 1977, 204, fig 109.65.

**F36 BILLHOOK**
North Elmham Park, Norfolk.
*c*1050 –*c*1150.
Flattened, partly closed socket and blade with bevelled back edge curving gently to hooked tip. L 268mm.
Goodall 1980a, 513, fig 266.50.

**F37 BILLHOOK**
Netherton, Hampshire.
Mid 13th century.
Open socket with two holes for securing nails. Parallel-sided blade, hooked tip to cutting edge. L 206mm.
Goodall 1990-28, fig 9.2 no. 75.

**F38 BILLHOOK**
Weoley Castle, Birmingham, West Midlands.
*c*1270 to 1600.
Partly open socket, closed at base, with hole for securing nail. Parallel-sided blade with hooked end to cutting edge and rear point.
L 360mm.
Taylor 1974. For site see Oswald 1962.

**F39 BILLHOOK**
Norwich, Norfolk.
In 1507 fire deposit.
Nailed, partly open socket, closed at base.
Parallel-sided blade with rear point.
L 296mm.
Goodall 1993g, fig 145.1518.

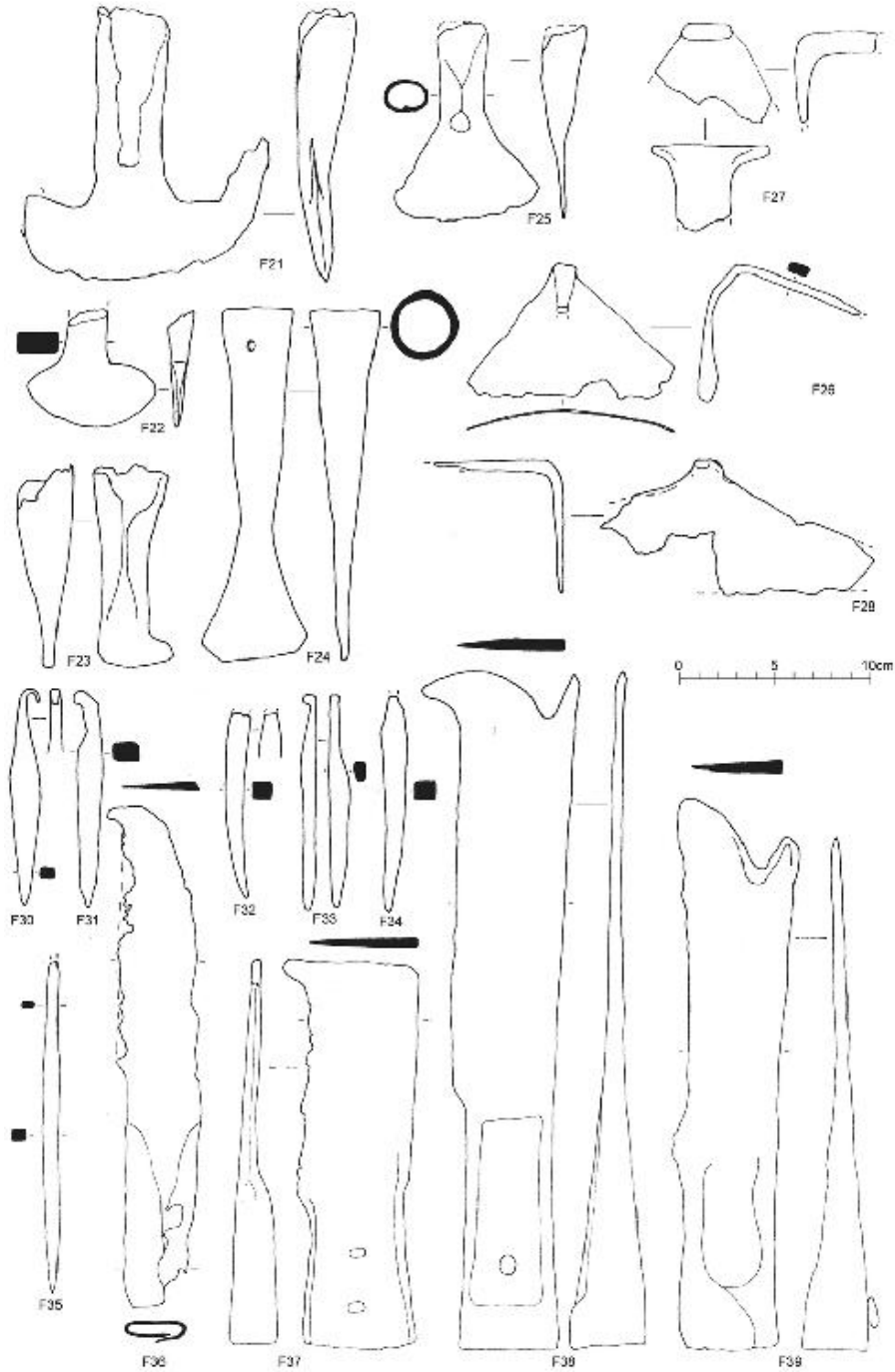



FIGURE 7.5
*Agricultural tools: Turf cutters, hoes, rake and harrow teeth, and billhooks*

**F40 WEEDHOOK**
Goltho Manor, Lincolnshire.

*c*1100 –1150.
Broken, strongly recurved crescent-shaped blade with tip of clenched tang missing.
L 94mm.
Goodall 1987, fig 156.30.

**F41 WEEDHOOK**
Thetford, Norfolk.
12th century.
Crescent-shaped blade, tang broken. L 62mm.
Goodall 1984.

**F42 WEEDHOOK**
Woodperry, Oxfordshire.
12th to 14th century.
Crescent-shaped blade and plain tang, tip reduced in length since first published.
L 99mm.
Wilson 1846, 122 and figure.

**F43 WEEDHOOK**
Abingdon, Oxfordshire.
12th or 13th century.
Crescent-shaped blade, broken tang. L 88mm.
Parrington 1976, 47, fig 37.13.

**F44 WEEDHOOK**
Clough Castle, Co. Down.
*c*1200 to *c*1225.
Crescent-shaped blade with clenched tang tip. L 91mm.
Waterman 1954, 137, fig 11.13.

**F45 WEEDHOOK**
Dyserth Castle, Clwyd.
Site: 1241–63.
Sharply recurved crescent-shaped blade extending towards tang which has broken clenched tip. L 134mm.
Glenn 1915.

**F46 WEEDHOOK**
Upton, Gloucestershire.
Mid to later 13th century.

Crescent-shaped blade with tang. Blade tip lost, tong tip distorted. L 78mm.
Rahtz 1969a, 108, fig 12.130.

**F47 WEEDHOOK**
Newbury, Berkshire.
*c*1260–90.
Crescent-shaped blade, tang broken. L 58mm.
Goodall 1997, fig 19, no. 6.

**F48 WEEDHOOK**
Lyveden, Northamptonshire.
Late 13th, very early 14th century.
Broken crescent-shaped blade, complete tang. L 104mm.
Bryant and Steane 1971, 55, fig 13e.

**F49 WEEDHOOK**
Netherton, Hampshire.
Mid 14th century.
Broken crescent-shaped blade and tang.
L 87mm.
Goodall 1990-28, fig 9.2, no. 80.

**F50 WEEDHOOK**
Clough Castle, Co. Down.
Site: *c*1200 to early 14th century, re-occupied in 15th or early 16th century.
Broken crescent-shaped blade, tang tip clenched. L 91mm.
Waterman 1954, 137, fig 11.14.

**F51 WEEDHOOK**
Lyveden, Northamptonshire.
Second quarter 13th to very early 14th century.
Half-moon shaped blade, tang broken.
L 49mm.
Steane and Bryant 1975, 119, fig 45.14.

**F52 WEEDHOOK**
Woodperry, Oxfordshire.
12th to 14th century.
Wedge-shaped blade and plain tang, tip reduced in length since first published.
L 130mm.

Wilson 1846, 122 and figure.

**F53 WEEDHOOK**
Copt Hay, Tetsworth, Oxfordshire.
13th century.
Broken wedge-shaped blade, tang complete.
L 79mm.
Robinson 1973, 101, fig 23.8.

**F54 WEEDHOOK**
Woodperry, Oxfordshire.
12th to 14th century.
Triangular-shaped blade, plain tang. L 91mm.
Ashmolean Museum, Oxford, 1873.57. For site see Wilson 1846.

**F55 WEEDHOOK**
Goltho, Lincolnshire.
Late 13th to early 14th century.
Triangular-shaped blade, clenched round tang tip. Former wooden handle further secured by small iron collar. L 115mm.
Goodall 1975a, 86–87, fig 41.86.

**F56 WEEDHOOK**
Winchester, Hampshire.
Late 15th–early 16th century.
Tang and blade broken. L 65mm.
Goodall 1990-11, fig 108.906.

**F57 WEEDHOOK**
Rhuddlan, Clwyd.
14th century,?earlier part, or conceivable 1290–1300.
Strongly recurved crescent-shaped blade with pair of flanges at base of broken tang.
L 124mm.
Goodall 1994, fig 17.1, no. 13.

**F58 WEEDHOOK**
Wallingstones, Hereford and Worcester. *c*1250.
Half-moon shaped blade, flanged tang with clenched tip. L 108mm.
Bridgewater 1970–72, 100, fig 16.32.

**F59 WEEDHOOK**

Wallingstones, Hereford and Worcester.
Post-1500 destruction layer with residual objects; site occupied from *c*1200.
Incomplete half-moon shaped blade, flanged tang with clenched tip. L 107mm.
Bridgewater 1970–72, 104, fig 16.86.

**F60 WEEDHOOK**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Wedge-shaped blade, flanged tang with clenched tip. L 112mm.
Goodall 1975a, 86–87, fig 41.87.

**F61 WEEDHOOK**
Kettleby Thorpe, Lincolnshire.
14th to early 15th century.
Wedge-shaped blade with broken flanged and nailed tang. Iron-impregnated wood from former handle survives. L 97mm.
Goodall 1974a, 33, fig 18.10.

**F62 WEEDHOOK**
Low Caythorpe, Humberside.
15th to early 16th century.
Triangular blade, incomplete flanged and nailed tang. L 101mm.
Coppack 1974, 41, fig 5.1.

**F63 WEEDHOOK**
Somerby, Lincolnshire.
11th to 15th century.
Wedge-shaped blade with nailed socket.
L 98mm.
Mynard 1969, 85, fig 13.Iw 94.

**F64 REAPING HOOK**
Hen Domen, Powys.
After 1200, probably before 1250.
Blade and tang fragment. L 106mm.
Barker and Higham 2000.

**F65 REAPING HOOK**
Portchester Castle, Hampshire.
13th century.
Tang and broken blade. L 89mm.

Hinton 1977, 204, fig 109.69, scale 2:3, not 1:3.

**F66 REAPING HOOK**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Broken curved blade, complete tang.
L 114mm.
For site see Beresford 1975.

**F67 REAPING HOOK**
Staines, Surrey.
1300–1500.
Broken curved blade with socket. L 106mm.
Excavated by K Crouch.

**F68 REAPING HOOK**
Lyveden, Northamptonshire.
Site: 11th to very early 14th century.
Flanged socket and base of curved blade.
L 59mm.
Bryant and Steane 1971, 57, fig 14b.

**F69 REAPING HOOK**
Lyveden, Northamptonshire.
Early 13th to first half 14th century.
Flanged socket, base of curved blade.
L 102mm.
Steane 1967, 29, fig 10d.

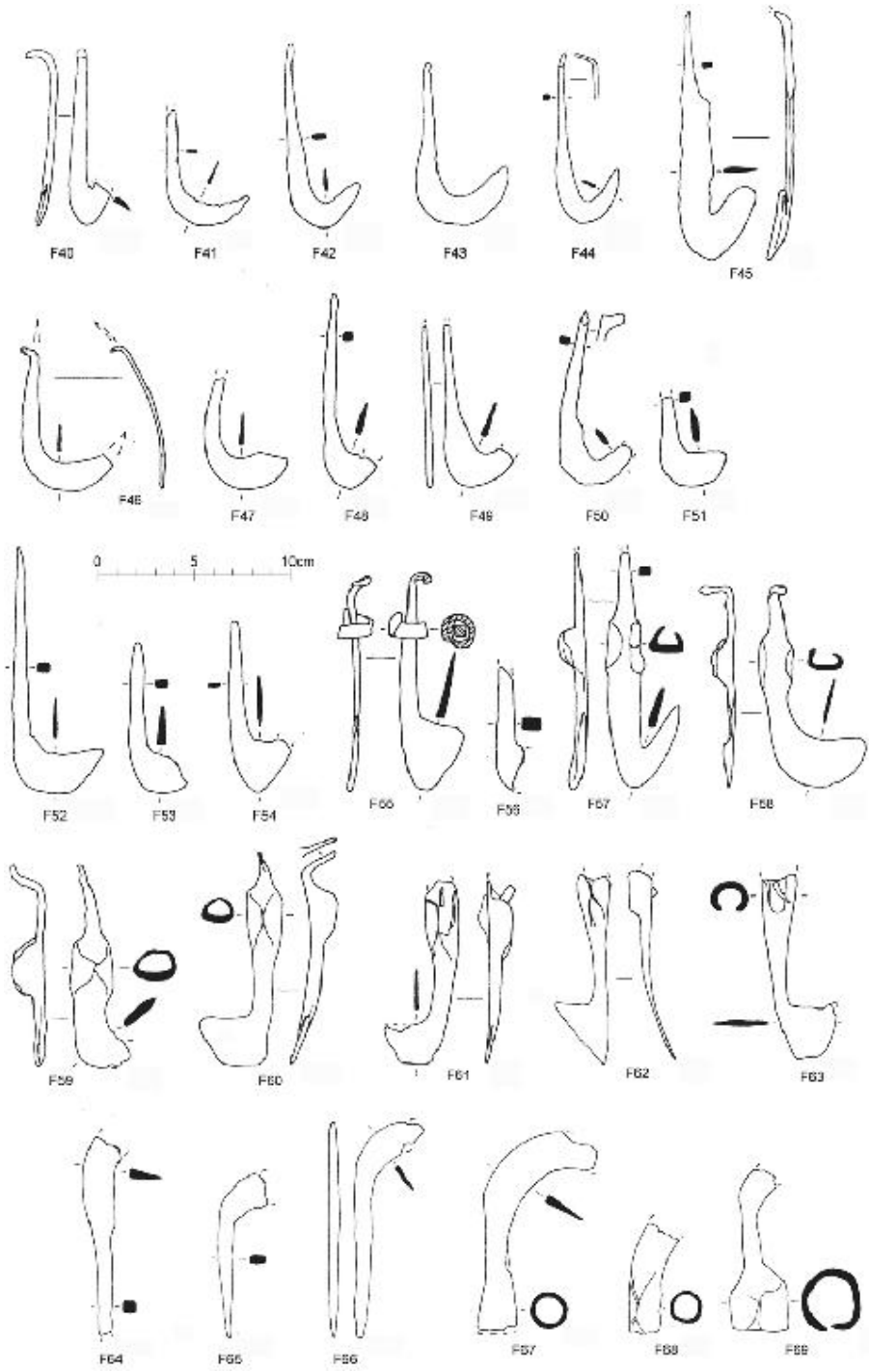



FIGURE 7.6
*Agricultural tools: Weedhooks and reaping hooks*

**F70 SICKLE**

Northolt Manor, Greater London.
Late Saxon to 13th century.
Blade and tang broken. L 322mm.
Excavated by J G Hurst.

**F71 SICKLE**
Stonar, Kent.
13th to 14th century.
Blade and tang broken. Saw-toothed cutting edge with mark on opposing face. L 489mm.
Excavated by N Macpherson-Grant.

**F72 SICKLE**
Thuxton, Norfolk.
Ploughsoil over site of 12th to end 14h century.
Blade and tang broken. L 237mm.
Excavated by L A S Butler and P Wade-Martins.

**F73 SICKLE**
Thuxton, Norfolk.
12th to end 14th century.
Tang and broken blade. L 172mm.
Excavated by L A S Butler and P Wade-Martins.

**F74 SICKLE**
Winchester, Hampshire.
Mid to?late 13th century.
Blade and tang broken. Wrought iron.
L 185mm.
Goodall 1990-11, fig 108.904.

**F75 SICKLE**
Alsted, Surrey.
*c*1250–1350.
Blade and tang broken. L 172mm.
Goodall 1976a, 56, fig 34.12.

**F76 SICKLE**
Conway, Gwynedd.
Site: 1283–?1404.
Tang complete, broken blade with thickened back rib. L 150mm.
Butler 1964, 126, fig 8.7.

**F77 SICKLE**
Writtle, Essex.
*c*1306 to *c*1425.
Blade and tang broken. L 176mm.
Rahtz 1969b, 87, fig 48.82.

**F78 SICKLE**
Writtle, Essex.
*c*1425 to 1521, mixed with later material.
Blade and tang broken. L 186mm.
Rahtz 1969b, 87, fig 48.81.

**F79 SICKLE**
London.
Late 15th, early 16th century.
Blade and tang broken. L 247mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**F80 SICKLE**
West Hartburn, Durham.
13th to 16th century.
Tang complete, blade broken. L 239mm.
Still and Pallister 1964, 200, fig 6.31.

**F81 SICKLE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Blade and tang broken. L 312mm.
Goodall 1988, fig 73.3; b orenius and Charlton 1936.

**F82 SICKLE**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Tang complete, blade broken. L 167mm.
Goodall 1980a, 513, fig 266.57.

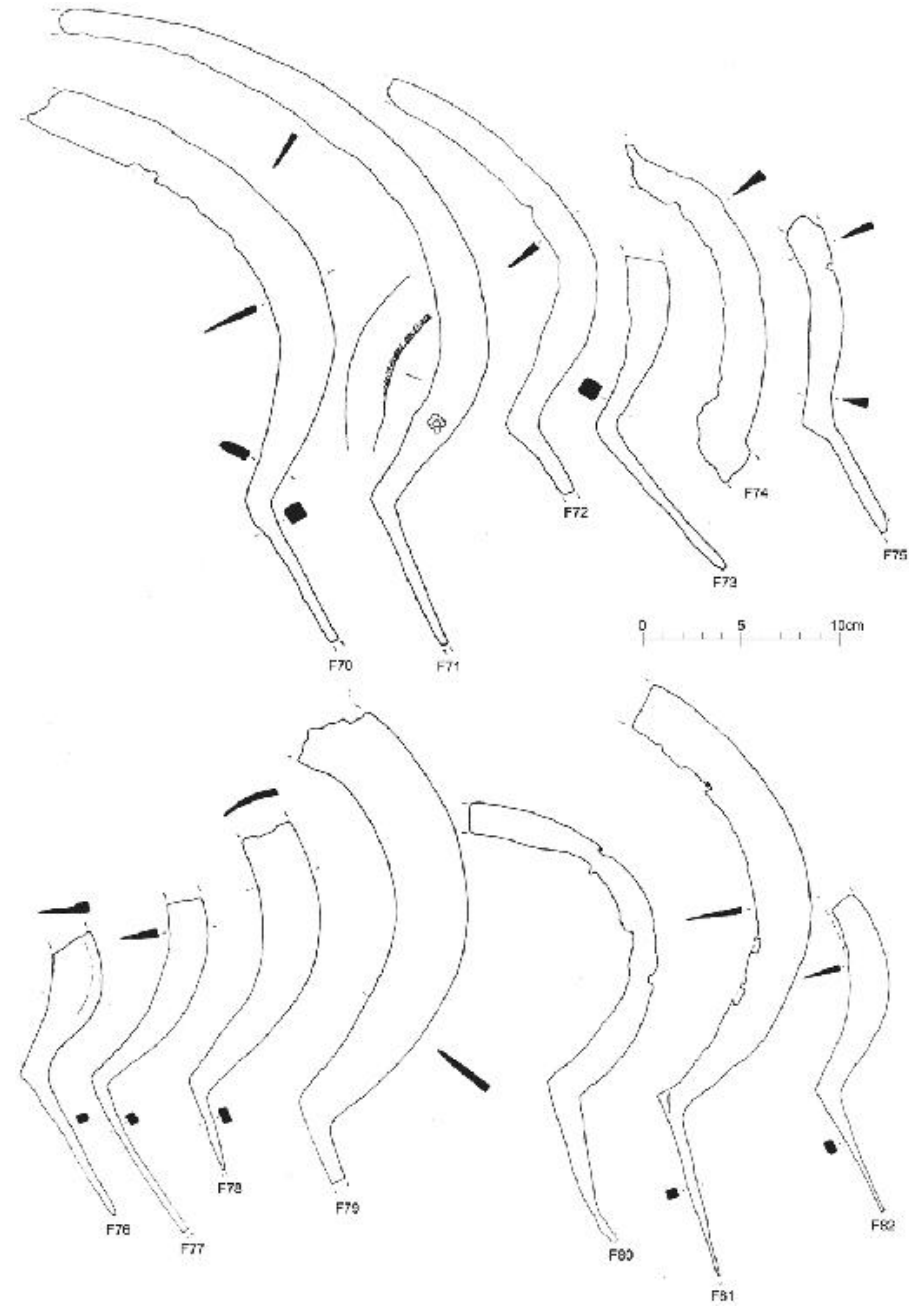



FIGURE 7.7
*Agricultural tools: Sickles*

**F83–90 SICKLES**

Ayton Castle, North Yorkshire.

13th century. Found together with other sickle blades, spearhead, axe,

shears and pitchfork.

Blades and tangs broken except **F83**, **F84**(?) and **F87** (blades complete), **F93** (tang complete).

(See also **F105–107**).

**F83** L 312mm (Rimington and Rutter 1967, fig 11.37/4).

**F84** L 280mm (Rimington and Rutter 1967, fig 11.37/5).

**F85** L 314mm (Rimington and Rutter 1967, fig 11.37/7).

**F86** L 325mm (Rimington and Rutter 1967, fig 11.37/1).

**F87** L 307mm. Acc No 276.61.

**F88** L 281mm (Rimington and Rutter 1967, fig 11.37/2).

**F89** L 252mm (Rimington and Rutter 1967, fig 11.37/3).

**F90** L 244mm (Rimington and Rutter 1967, fig 11.37/6).

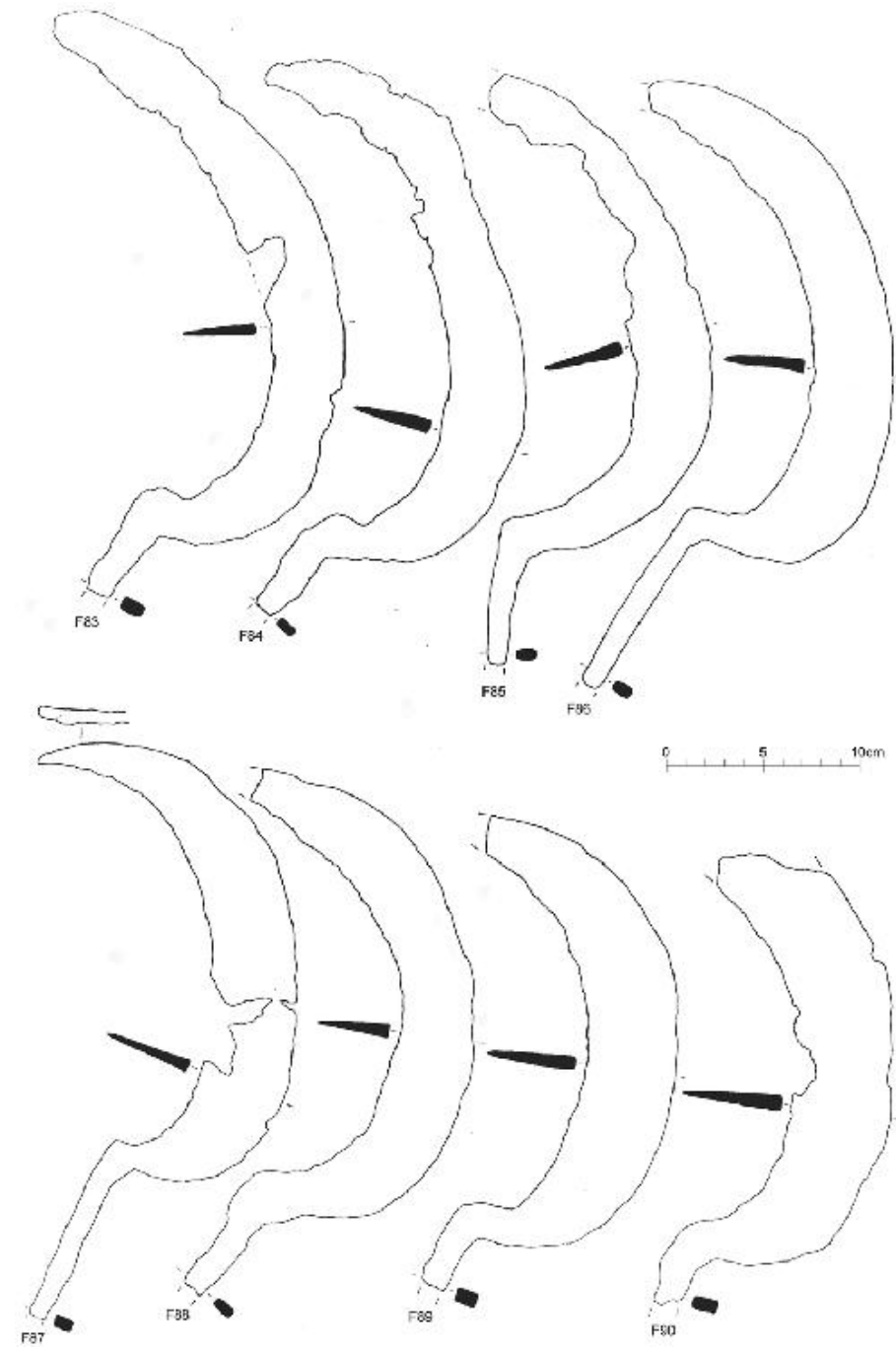



FIGURE 7.8
*Agricultural tools: Sickles*

**F91–95 SICKLES**
Ayton Castle, North Yorkshire.

13th century (see **F83**).
**F91** L 271mm (Rimington and Rutter 1967, fig 11.37/8).
**F92** L 216mm (Rimington and Rutter 1967, fig 11.37/9).
**F93** L 122mm. Acc No 281.61.
**F94** L 89mm. Acc No 280.61.
**F95** L 73mm. Acc No 282.61.

**F96 SICKLE**
Cambokeels, Durham.
Later 14th to early 16th century.
Blade and tang broken. L 265mm.
Hildyard 1949, 199, fig 3.22. Bowes Museum, Barnard Castle.

**F97 SICKLE**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Blade tip. L 151mm.
For site see Stone and Charlton 1935.

**F98 SICKLE**
Lyveden, Northamptonshire.
Second quarter 13th century to very early 14th century.
Blade and tang fragment. L 149mm.
Steane and Bryant 1975, 130, fig 48.142.

**F99 SICKLE**
Dyserth Castle, Clwyd.
Site: 1241–63.
Blade tip fragment. L 125mm.
Glenn 1915.

**F100 SICKLE**
Brandon Castle, Warwickshire.
13th century,?post-1226.
Sickle blade fragment with tip, toothed cutting edge. L 269mm.
Chatwin 1955, 81, fig 11.15.

**F101 SICKLE**
Hangleton, East Sussex.
13th to 14th century.
Blade fragment with tip. L 226mm.
Holden 1963, 171, fig 37.7.

**F102 SICKLE**
Copt Hay, Tetsworth, Oxfordshire.
Late 13th to 14th century.
Blade fragment with tip. L 154mm.
Robinson 1973, 101, fig 23.7.

**F103 SICKLE**
Keighton, Nottinghamshire.
Early 14th century.
Blade and tip fragment. L 162mm.
Coppack 1971, 58, fig 8.6.

**F104 SICKLE**
Lyveden, Northamptonshire.
*c*1350 to 1450.
Blade tip fragment. L 146mm.
Steane and Bryant 1975, 130, fig 48.141.

**F105–F107 SICKLES**
Ayton Castle, North Yorkshire.
13th century. Found together with other sickles, spearhead, axe, shears and pitchfork.
Blade fragments.
Rimington and Rutter 1967, 59. (See also **F83–95**.)
**F105** L 239mm. Acc. No. 279.61.
**F106** L 231mm. Acc. No. 278.61.
**F107** L 229mm. Acc. No. 277.61.

**F108 SICKLE**
Durrance Moat, Hereford and Worcester.
*c*1200 to 1250.
Blade fragment. L 201mm.
Oswald and Taylor 1964, 73, fig 4.22.

**F109 SICKLE**
Hangleton, East Sussex.
13th to 14th century.
Blade fragment. L 164mm.
Holden 1963, 171, fig 37.8.

**F110 SICKLE**
Stonar, Kent.

*c*1275–1385.
Blade fragment. L 210mm.
Excavated by N Macpherson-Grant.

**F111 SICKLE**
Winchester, Hampshire.
14th century.
Blade fragment. L 125mm.
Goodall 1990-11, fig 108.905.

**F112 SICKLE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Blade fragment. L 207mm.
Goodall 1979a, 121, fig 62.59.

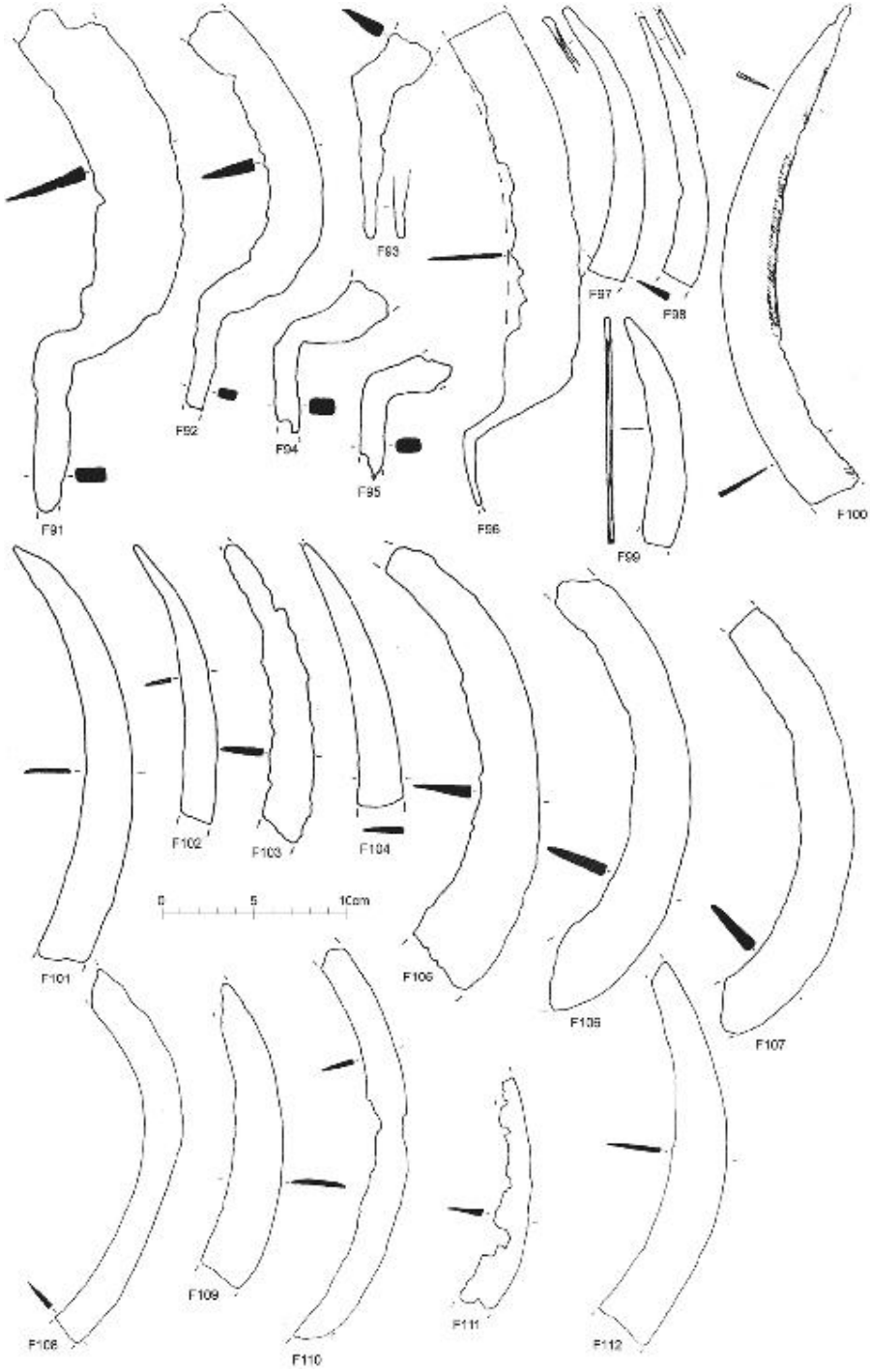



FIGURE 7.9
*Agricultural tools: Scythes*

**F113 SCYTHE**

King's Lynn, Norfolk.
*c*1250–1300.
Centre of blade lost in modern disturbances, rest drawn as found.
Parallel-sided blade, back curving in to tip.
Clenched tang. L 530mm.
Goodall and Carter 1977, 295, fig 133.35.

**F114 SCYTHE**
Cheddar, Somerset.
Later 13th century to *c*1600.
Blade fragments with back rib. L 218mm.
Goodall 1979d, 266, fig 90.172.

**F115 SCYTHE**
Upton, Gloucestershire.
Possibly post-medieval, site 13th century or earlier to late 14th century.
Blade fragment, thickened back rib.
L 279mm.
Hilton and Rahtz 1966, 120, fig 13.17.

**F116 SCYTHE**
Thetford, Norfolk.
11th century.
Blade tip. L 164mm.
Goodall 1984.

**F117 SCYTHE**
Bolton, Fangfoss, Humberside.
Early 14th century.
Blade tip. L 98mm.
Goodall 1978b, 143, fig 30.23.

**F118 SCYTHE**
Barrow Mead, Bath, Somerset.
14th century.
Blade tip. L 107mm.
Goodall 1976b, 35, fig 11.25.

**F119 PITCHFORK**
Ayton Castle, North Yorkshire.
13th century. Found with sickles, spearhead, axe and shears.
Tang and near complete tines, gently curved in side view. L 193mm.

Rimington and Rutter 1967, 60, fig 11.37/20.

**F120 PITCHFORK**
Somerby, Lincolnshire.
11th to 15th century.
Complete, broken tines. L 129mm.
Mynard 1969, 84, fig 13.Iw 84.

**F121 PITCHFORK**
Badby, Northamptonshire.
15th to 16th century and later.
Tang broken, short curved tines straight in side view. L 143mm.
Excavated by Mrs M Gray.

**F122 PITCHFORK**
Thelsford Priory, Warwickshire.
In 16th century destruction deposit.
Broken tang, short tines, one broken.
L 133mm.
Excavated by Mrs M Gray.

**F123 PITCHFORK**
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Complete tang. Broken tines. Tip of more complete tine upturned. L 206mm.
Mynard 1969, 84, fig 13.IW85.

**F124 PITCHFORK**
Cambokeels, Durham.
Later 14th to early 15th century.
Complete tang, one tine broken, other gently curved. L 292mm.
Hildyard 1949, 197, fig 5.1.

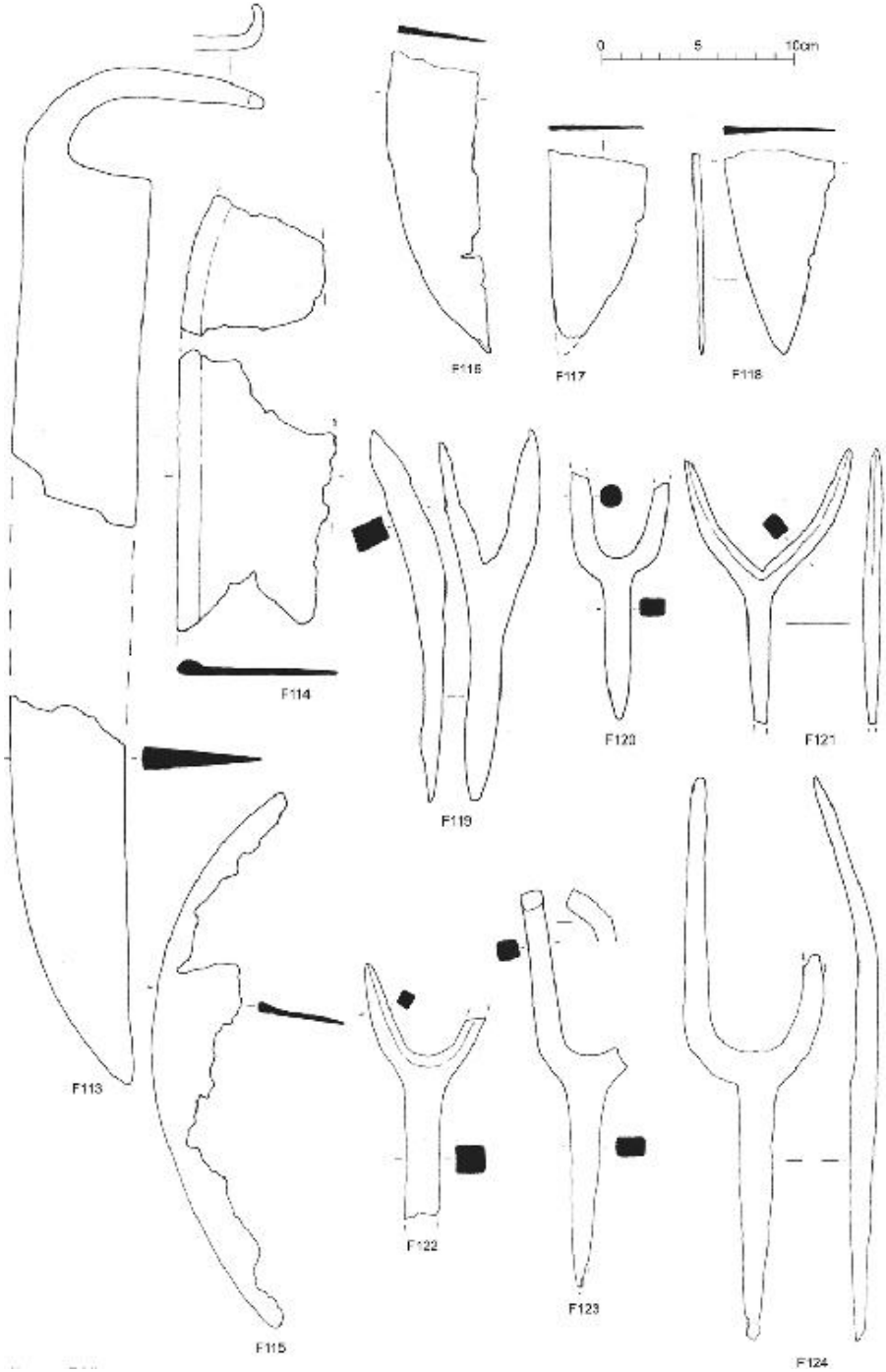



FIGURE 7.10
*Agricultural tools: Scythes and pitchforks*

**F125 PITCHFORK**

Somerby, Lincolnshire.
11th to 15th century.
Tang and tines broken. L 345mm.
Mynard 1969, 84, fig 13.IW 83.

**F126 PITCHFORK**
West Hartburn, Durham.
Medieval to 16th century.
Tang broken, tines damaged but almost complete. L 231mm.
Still and Pallister 1967, 146, fig 4.2.

**F127 PITCHFORK**
Badby, Northamptonshire.
15th to 16th century and later.
Tang and tines broken, tines curved in side view. L 183mm.
Excavated by Mrs M Gray.

**F128 SPUD**
Shifnal, Shropshire.
13th to earlier 14th century.
Rectangular blade with curved shoulders, broken tang. L 110mm.
Barker 1964, 204, fig 44.SHI.M81.

**F129 SPUD**
Seacourt, Oxfordshire.
14th century.
Rectangular blade, complete tang. L 82mm.
Biddle 1961–62, 177, fig 30.4, scale 1:4, not 1:3.

**F130 SPUD**
Barton Blount, Derbyshire.
Croft E: late Saxon to late 15th century.
Rectangular blade, curved shoulders, broken tang. L 86mm.
Goodall 1975b, 98, fig 46.7.

**F131 OX GOAD**
Winchester, Hampshire.
Late 10th–?11th century.
Broken loop and point. H 19mm.
Goodall 1990-11, fig 108.912.

**F132 OX GOAD** (not illustrated)

Weaverthorpe Manor, North Yorkshire.
13th and 14th century.
Fragmentary ox goad.
Brewster 1972, 132.

**F133 OX GOAD (?)**
Sawtry, Cambridgeshire.
15th to early 16th century.
Loop with curved and pointed square-sectioned stem. L 68mm.
Moorhouse 1971b, 86, fig 4.11.

**F134 BELL**
Wallingstones, Hereford and Worcester.
Post-1500 destruction layer with objects from 13th century onwards.
Damaged bell retaining suspension loop for clapper. Traces of overall copper-alloy plating. W 56mm.
Bridgewater 1970–72, 104, fig 16.85.

**F135 BELL**
Upton, Gloucestershire.
Late 13th–late 14th century.
Damaged body and handle. W 51mm.
Hilton and Rahtz 1966, 120, fig 14.29.

**F136 BELL**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Fragment of bell and handle. Copper-alloy plating. W 37mm.
Goodall 1979a, 121, fig 63.74.

**F137 BELL**
Burton-in-Lonsdale, North Yorkshire.
Later 13th–mid 14th century.
Body fragment. W 34mm.
Moorhouse 1971a, 95, fig 3.21.

**F138 BELL**
Winchester, Hampshire.
15th century.
Damaged bell with D-shaped handle and swivelling clapper loop. Overall copper-alloy plating. W 50mm.
Luff 1990, fig 209.2278.

**F139 BELL CLAPPER**
Cheddar, Somerset.
Early 13th century.
Suspension hook broken. L 52mm.
Goodall 1979d, 271, fig 91.160.

**F140 BELL CLAPPER**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Hooked top. L 74mm.
Goodall 1979a, 121, fig 63.73.

**F141 BELL CLAPPER**
Castle Acre Castle, Norfolk.
1140s–50s deposit with derived material.
Site founded soon after 1066.
Hooked top. L 95mm.
Goodall 1982, fig 40, no.113.

**F142 BELL CLAPPER**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Hooked top. L 95mm.
Goodall 2002, fig 7.5, no. 142.

**F143 BELL CLAPPER**
Dyserth Castle, Clwyd.
Site: 1241–63.
Hooked top. L 135mm.
Glenn 1915.

**F144 BELL CLAPPER**
London.
Late 15th–early 16th century.
Hooked top. L 135mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**F145 BELL CLAPPER**
Burnham Church, Humberside.
Demolition *c*1550.
Hooked top. L 135mm.
Excavated by G Coppack.

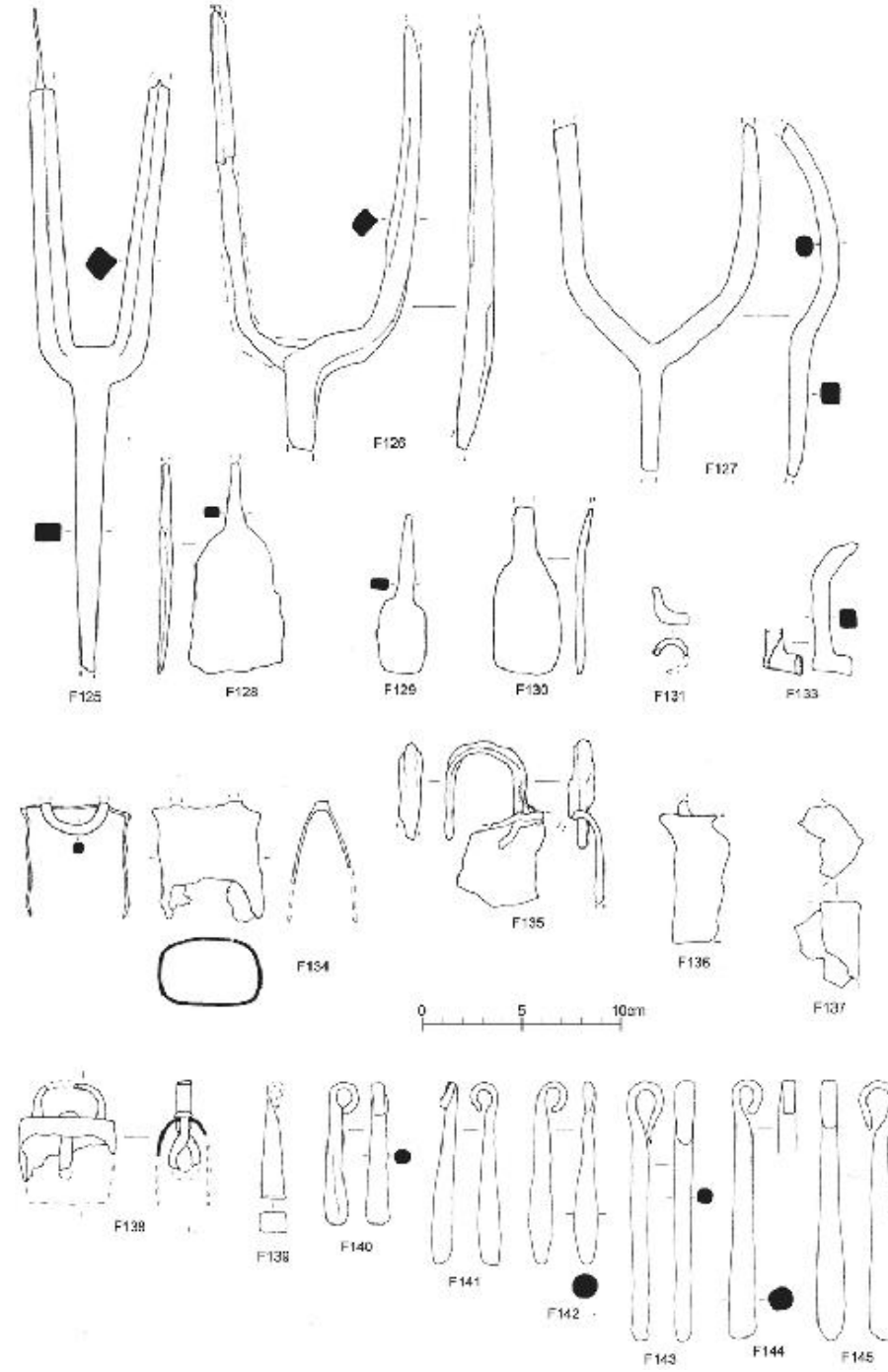



FIGURE 7.11
*Agricultural tools: Pitchforks, spuds, ox goads, bells and bell clappers*

# 8
# Knives, Shears and Scissors

## 8.1 Knives

The two basic types of medieval knife have whittle tangs inserted into handles and scale tangs with riveted handles. The terms used to describe their parts (Figure 8.1) are based, with a few amendments, on those in use in the Sheffield cutlery trade as recorded by Dyson (1936).

Medieval knives sometimes have a shoulder between the back of the blade and tang, and always a choil or indentation between the cutting edge and tang. Their blades can be decorated in various ways, most commonly with grooves or inlay, but occasionally with a swage, a long ornamental bevel along the back. Cutler's marks, generally inlaid with non-ferrous metal in the medieval period, are struck on the mark side of some blades; the other side is today called the pile or reverse side. Whittle tang knives may have single or multiple hilt plates at the junction between blade and tang, and many scale tang knives have riveted or soldered shoulder plates at this point. End caps occur on both types of tang handle. Rivets of iron or copper allow pass through scale tangs to hold the individual scales in place, but decorative pins are inset separately in each side.

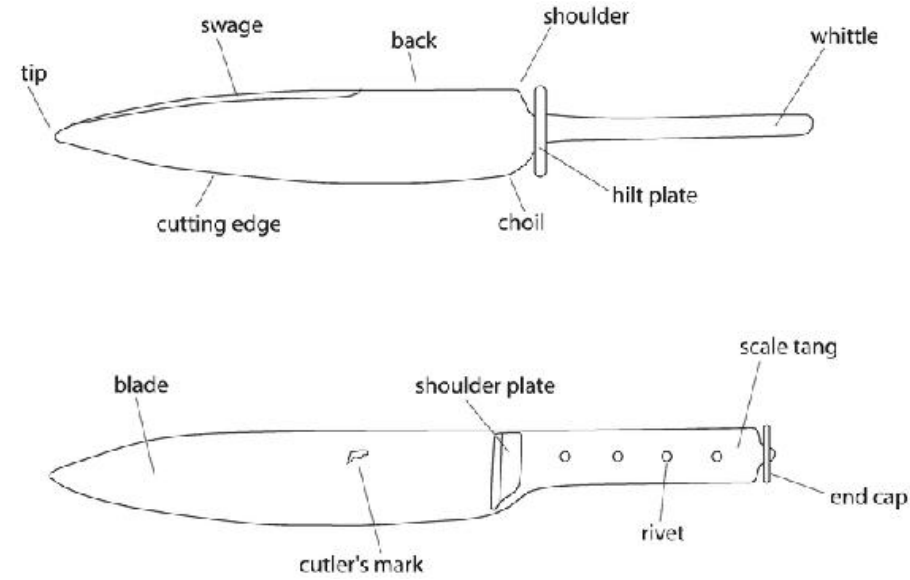



FIGURE 8.1
*Knives: terminology*

## Knife moods

Knives were forged from strips or bars of iron generally with steel incorporated in some way or another (see Metallurgy below). **G1–3** are partly forged knives, which are called moods in the cutlery trade today to distinguish them from machine-cut blanks. All have whittle tangs.

## Whittle tang knives

Whittle tang knives have pointed tangs which were inserted into wood or bone handles, and they have been classified according to blade form. Some of the catalogued knives lack tangs, but their date implies that these can only have been of whittle tang type. Ten types (A-J) may be isolated. (Figure 8.2).

## *Type A whittle tang knife*

Blade back rises before angling down to tip. Cutting edge straight or curved.

The knife with a rising angled back is one of the more characteristic types of pre-Conquest knife, and the medieval examples **G4–17** tend to have fairly long

blades which are not particularly deep, and the angling is consequently not always very marked. The angling down to the tip is generally straight, although on **G8** it is curved. Type a knives are found in contexts of 11th to 13th-century date.

## *Type B whittle tang knife*

Blade back flat and straight before angling down to tip. Cutting edge straight or curved.

Knives **G18–39** have more or less parallel backs and cutting edges, some of which have been altered by sharpening. The angling down to the tip is frequently gentle, but it can be more marked, as on **G34**, or curved, as on **G29** and **G31**. Knives of this type occur throughout the medieval period, but they are more common in the earlier part.

## *Type C whittle tang knife*

Blade with flat straight back parallel to cutting edge which rises close to tip to meet back.

The curvature of the cutting edges of knives **G40–47** varies from the stub end of **G40** to the gentle curve of **G42** or **G46**. The blades are all plain, with the notable exception of **G40** which has some decorative shaping close to the tip. The few known examples of the type occur throughout the medieval period.

## *Type D whittle tang knife*

Blade black and cutting edge parallel before both taper to tip.

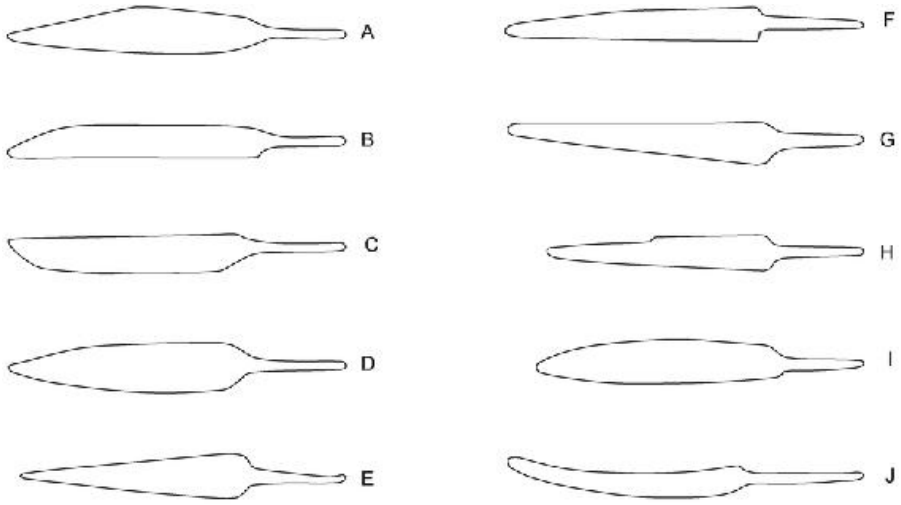



FIGURE 8.2
*Types of medieval whittle tang knife*

Knives **G48–121** represent the second most common type of medieval knife, and their size varies from small knives such as **G89–90** to long ones such as **G76** and **G119**. The blades have no constant proportion, and although **G57–58**, for example, are of similar length, their depths are considerably different. a number of the longer, more slender blades such as **G107** and **G119** may be from single-edged knife daggers. Type D knives are found throughout the medieval period, but are particularly common in 12th and 13th-century contexts.

## *Type E whittle tang knife*

Blade back and cutting edge taper more or less equally to tip.

**G122–205** are examples of the most common type of medieval knife, and their size range is as wide, if not wider, than those of Type D. The blades range in size from small examples such as **G122–G123**, **G128** or **G151**, to **G153**, **G169**, **G197** and **G204**. Many of these larger examples are probably single-edged knife-daggers. The majority of blades taper evenly to the tip, but on **G127**, **G130**, **G135**, **G142**, **G163** and a few others it steepens and is more marked close to the end. More of these knives than of any other type with a whittle tang have cutler's marks stamped on the blade. Type E knives are found throughout the medieval period, but they occur in greatest numbers in 13th and 14th-century contexts.

## *Type F whittle tang knife*

Blade back tapers from shoulder down to cutting edge.

The six knives of this type **G206–211** are from contexts of the 12th to 15th centuries. None of the examples has any distinctive feature.

## *Type G whittle tang knife*

Cutting edge of blade rises to meet the tip of straight back.

The two knives **G212–213**, both with broken tangs come from late medieval contexts, and are related to scale tang knife Type Q.

## *Type H whittle tang knife*

Blade with stepped back

Knives **G214–217** all lack complete blades, and the shape of the tip is consequently uncertain, but in general form they seem related to Types D and e. The closely dated examples come from contexts of the 13th to 14th century.

## *Type I whittle tang knife*

Blade with convex curve to back.

The curvature of the back of knives **G218–257** ranges from slight to marked, and the cutting edge, although generally convex or bellied, is occasionally straight. The concave or elongated S-shaped cutting edges of some knives is the result of repeated sharpening. a number of these knives are too well finished to have been used for day-to-day practical work, and they are probably domestic. **G221**, **G228**, **G232** and **G248** have single or multiple hilt plates, **G239** a copper-alloy backing strip, while **G246** has inlaid decoration on the blade. The Southwark knife (Cowen 1971), itself probably of 12th to 13th-century date and an import from the East Baltic, is of this type and has a formidably inlaid blade. Knives of Type I are of 11th to 14th-century date, and are related to scale tang knives of Type R.

## *Type J whittle tang knife*

Blade with concave back.

**G258–260** are knives of this type, none complete, and none particularly closely dated.

## Scale tang knives

Scale tang knives have flat tangs onto which separate, organic scales were riveted to form a handle. They were probably introduced during the 13th century, and in the following discussion the pre 13th-century element of any context date has been ignored. Six types (M–R) may be isolated (Figure 8.3).

### *Type M scale tang knife*

Shoulder and choil between blade and tang. Blade back and cutting edge parallel before both taper to tip.

**G261–262** are knives of this type, both from the 13th to 14th-century contexts. The blade form is identical to that of whittle tang knife Type D, and another type of scale tang knife, Type O.

### *Type N scale tang knife*

Shoulder and choil between blade and tang. Blade back and cutting edge taper more or less equally to tip.

**G263–269** are knives of this type, from 13th to 16th-century contexts, although they are most common in the 14th century. The blades are similar in size, but for the slender form of **G266**. The blade form is identical to that of whittle tang knife Type E, and another scale tang knife, Type P.

### *Type O scale tang knife*

Back of blade and tang in line. Blade back and cutting edge parallel before both taper to tip.

Knives **G270–297** are of this type, and most have long slender blades. a significant number retain shoulder plates or evidence for them, implying that they were for personal use, whilst more robust examples such as **G280** and **G288**, the latter worn by repeated sharpening, are likely to have had more

practical uses. Type O knives are known from 13th to 16th-century contexts, but are commonest in the late medieval period. They are related to knife Types D and M.

### *Type P scale tang knife*

Back of blade and scale tang in line. Blade back and cutting edge taper more or less equally to tip.

Knives **G298–318** generally have long and slender blades with an elegant taper, and the bellied blade of **G316** is an unusual feature. Many of these knives were probably used for eating, and a number have, or had, shoulder plates fronting the handle. Type P is found almost equally commonly in contexts from the 13th to 16th centuries, and is related to knife Types E and N.

### *Type Q scale tang knife*

Back of blade and scale tang in line. Cutting edge of blade rises to meet tip of straight back.

Knives **G319–332** mostly have long, slender blades with an even taper up to the tip, although a few blades have a more bellied form. The majority have, or had, shoulder plates, and the handle of **G321** was decorated with a row of pins linking rivet heads down the side of each scale. Type Q knives, found in contexts of 13th to 16th-century date, are related to whittle tang knives of Type G.

### *Type R scale tang knife*

Convex curved back of blade in line with tang.

Knives **G335–335** have curved backs similar to those of whittle tang knives of Type I and come from contexts spanning the 13th to 15th centuries.

## Knife uses

Knives had many uses, and as the catalogued examples indicate, there is a wide range of types and of sizes within types. Cleavers are discussed below (Chapter 11), but a number of the other knives must have had uses connected

with eating or food preparation. Forks were only occasionally used during the medieval period, since the practice of eating with a knife and fork was only introduced from Italy in the 16th century.

Cutlery for the table falls into one of two categories, according to whether it was used for the carving and service of the food or for assistance in eating it. Carving in a great medieval household was a formal ritual, and the broad knife blade **G336**, of Type I or R, is probably from a carving knife. It resembles the pair of carving knives in a set apparently made for the Duke of Burgundy between 1385 and 1404 (Dalton 1907), one of which was used to cut and the other to support and carry the meat and transfer it to the plate or trencher. The smaller knives in the set, 212mm and 242mm long, of Types Q and O respectively, were probably used to cut meat and bread.

Carving knives are unlikely to have been used very far down the social scale, but many of the smaller knives must have been used widely for cutting bread and meat and carrying it to the mouth. Various crafts will also have used some of the knives, and certain specialised leatherworkers' knives have already been noted (**E11-15**). However, leatherworking also required knives for trimming off waste from hides, and for other purposes, and these must be included amongst those classified here. a number of woodworking crafts also used different types of knife, and yet others, particularly of large size, are probably knife-daggers.

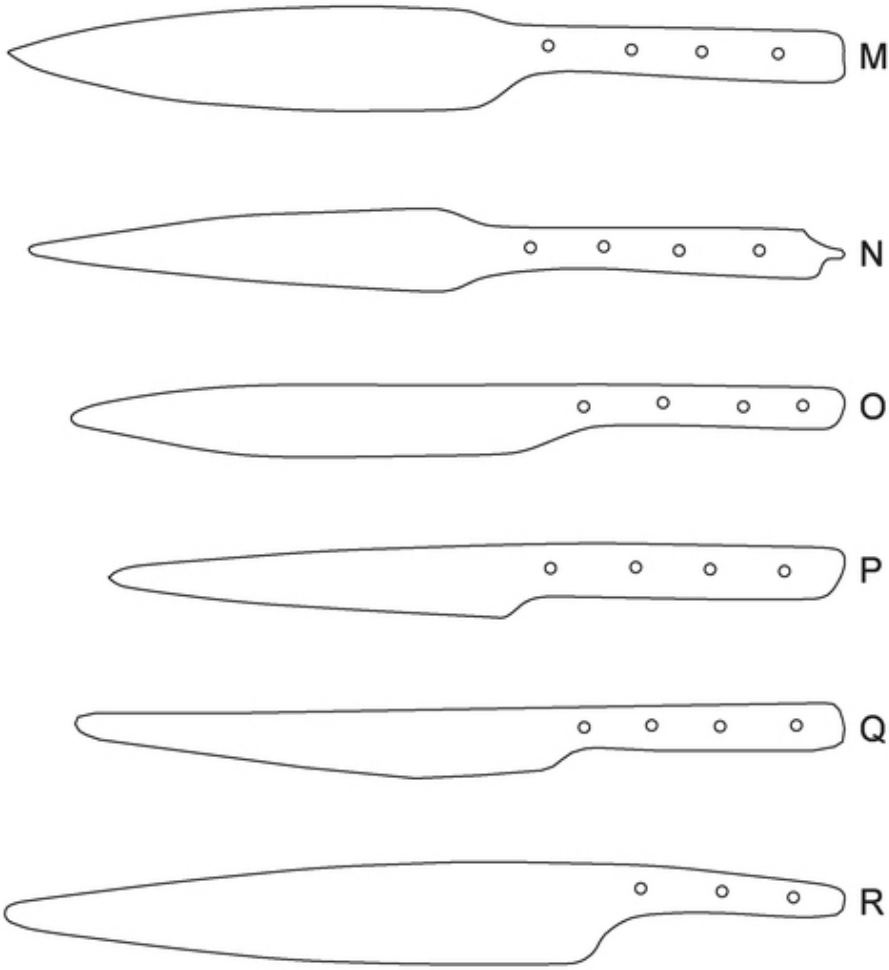



FIGURE 8.3
*Types of medieval scale tang knife*

## Dating of knives

Whittle tang knives were in use throughout the medieval period, their simple and practical method of hafting making them ideal for many purposes. Scale tang knives, more time consuming and costly to produce, and not all as practical, were probably introduced during the 13th century, although few of the early examples come from contexts of the 13th or 14th century alone; most are of 13th century to 14th-century date. The earliest dateable example is no longer that from Rayleigh Castle, Essex (Ward Perkins 1967, 51), since the site was occupied until *c*1350, not *c*1270.

The popularity and chronological range of the various types of medieval

knife are shown in Figures 8.4 and 8.5. Many of the whittle tang knife blade forms are in fact merely continuations of pre-Conquest forms, but use of the term 'scramasax-knife' should be avoided. The passage in Gregory of Tours about the murder of Sigibert reveals no more than that this name was applied to strong knives used by the Franks in the 6th century. No further details are given, and it should be remembered that the common word in use in Anglo-Saxon for knife was 'seax' (Evison 1961, 227). The scale tang knives repeat some of the most common whittle tang knife forms, although their blades are generally more slender.

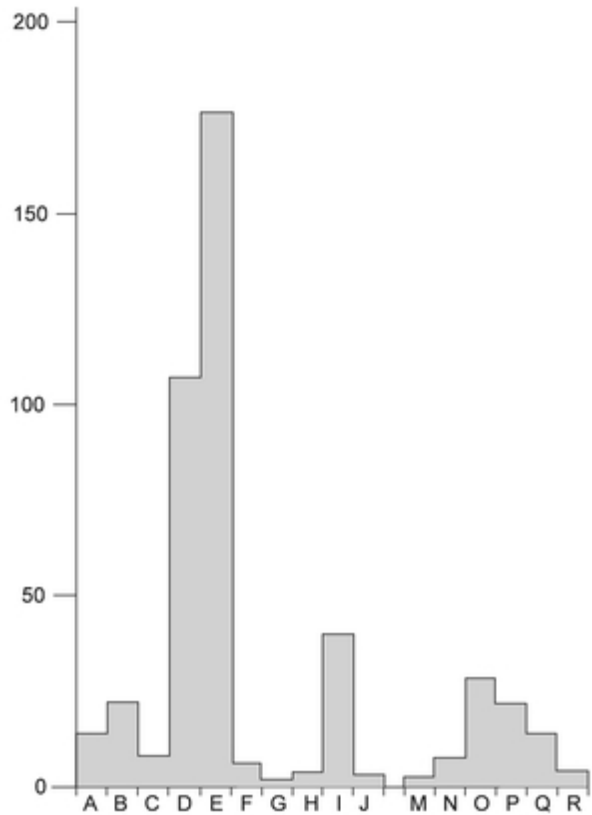



FIGURE 8.4
*Frequency of types of medieval knife. Types D and E include 33 and 92 uncatalogued knives respectively*

The bolster, an expansion set between blade and tang and forged in one with them, was introduced as a method of hafting in the 16th century (Hayward 1957, 4). None of the 16th-century knives with bolsters, however, need come from a context before about 1540. A knife from Waltham Abbey, Essex (Huggins 1972, 124, from F64) comes from the destruction level inside a

building of *c*1200–*c*1540, three from Hull (Goodall 1977b, 65, 70, figs 27.80–81, 29.145) are from early to mid 16th-century contexts, and one from Tattershall College, Lincolnshire (excavated by L J Keen) from a context of 1540 to *c*1560. a knife from Pleshey Castle, Essex (Goodall 1977c, 176, fig 38.6) is from a context of mid 13th to mid 16th century and later, and one from West Hartburn, Durham (excavated by L Still and A Pallister) is from a 13th to late 16th-century site.

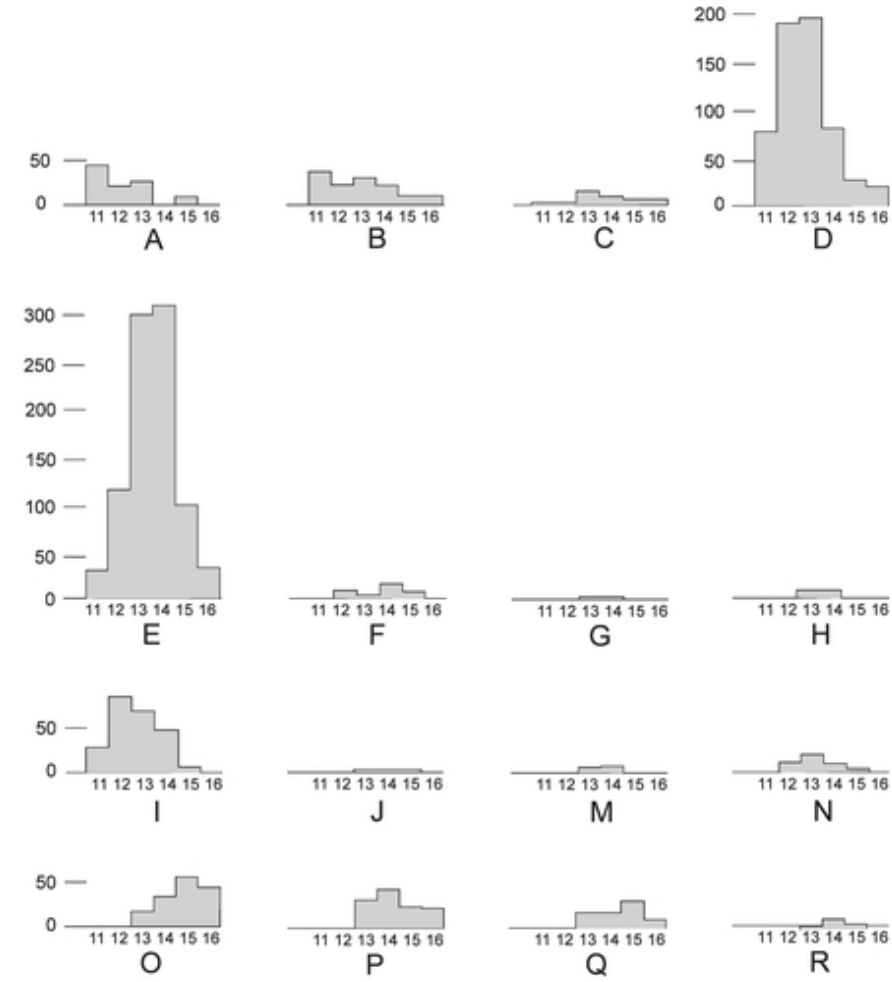



FIGURE 8.5
*Chronological range of types of medieval knife. Types D and E include 33 and 92 uncatalogued knives respectively*

## Knife blade decoration

Knives sometime have finely finished blades or handles and a number of blades, all from whittle tang knives where the tang survives, are pattern-welded, inlaid with nonferrous metal, or decoratively shaped in some way.

The technique of pattern-welding, described by Anstee and Biek (1961), is principally one of pre-Conquest date and applied to the forging of weapon blades, **G6**, **G15**, **G22**, **G68**, **G91**, **G131** and **G134**; and **G377–339**, are medieval knives with pattern-welded blades, several combined with steel edges.

All the knives with inlaid patterns of non-ferrous wire are fragmentary, and a number are residual in their contexts, but as a whole they are probably of 12th to 13th-century date. **G246** and **G340** have similar patterns, both including a running spiral, alternating scrolls and bar stops, and they may be compared with some of the inlay on the Southwark knife, which has been attributed to a 12th or 13th-century source in the East Baltic (Cowen 1971). **G341** has a more geometrical inlay comprising a lattice pattern between plain borders, and **G342** has simple intersecting spirals. The wire inlay on **G340** has been analysed and shown to be a silver-gold alloy, the silver predominating but with enough gold to give a 'gold' colour.

Knives **G29** and **G56** have single shallow grooves along each side of the blade, **G68** triple grooves, all serving simply as decoration in themselves and incapable of taking inlay. The deeper rectangular grooves of **G178**, **G190** and **G343–345** are more likely to have been intended to be inlaid, and some copper-alloy strip remains in **G190** and **G343**, **G178**, **G190**, **G343** and **G345** have single grooves, **G344** a pair, in all cases on only one side of the blade. The shallow grooved blades are from 11th to 13th-century contexts, the others are late medieval.

Knife **G239**, of 12th-13th century date, is unique in having a solid copper-alloy strip with incised geometrical decoration along the back of the blade, as is **G154** with three solid copper-alloy rivets set close to the back. The rivets are all roughly stamped, and the knife is of late 13th to 14th century date.

Type J knives have stepped backs, but a number of other types have decorated blade backs. **G40** has a cut out shaping close to the tip, and **G345–348** have swages or bevels along the back. The swage is a decorative feature, and is single sided on all but **G347**.

## Knife handles

Knife handles of wood or bone, or their traces, are sometimes found on knives, but metal fittings from them survive more frequently. The handles of whittle tang knives were generally plain, but a few hilt plates and shoulder plates, as

well as an end cap, are known. Scale tang knife handles were much more commonly embellished, and shoulder plates and end caps are found fairly frequently. Some handles are also decorated.

## *Whittle tang knife handles*

The front end of the handles of several whittle tang knives have single or multiple hilt plates. **G107**, **G164**, **G193**, **G228** and **G349** have single hilt plates fronting the lost handle, that of **G107** of iron, the others of copper alloy or non-ferrous metal and circular or oval in shape. These knives are from contexts with dates scattered throughout the medieval period, but those with multiple hilt plates seem more closely restricted to earlier, 11th to 13th-century contexts. **G75**, **G76**, **G221**, **G232** and **G248** and **G350–351** have multiple hilt plates which consist of a series of metal plates, regularly or irregularly spaced, with gaps which were originally filled by plates of organic material. The plates of **G75**, **G76** and **G232** are of copper alloy and, like **G351**, are heater shaped. **G248** has trapezoidal-shaped plates.

Shoulder plates are normally found on scale tang knives, but they occur exceptionally on two whittle tang knives, **G203** and **G352**. The non-ferrous plates survive on **G203**, but **G352** retains only the brazing fluid. Both knives are from Pleshey Castle, Essex, but neither is certainly medieval.

Whittle tangs either terminated within handles or projected beyond their ends. **G133**, **G192** and **G242** have clenched tang tips and evidently projected beyond the handle, as did **G355–354** which have circular end caps. The clenched tip and cap both served the same function of stopping handle and tang parting company, which was also the function of collars such as those on **G96** and **G355**.

## *Scale tang knife handles*

The individual scales from these knives are often missing, but the shape of the tang reflects that of the handle. The most common shape, found from the 13th-century onwards, has a straight back and drooping underside. **G262**, **G274**, **G299–300**, **G356–360** have straight-cut ends, **G278**, **G303–305**, **G309**, **G315**, **G325**, **G330** and **G361–366** rounded ends sometimes with a based point, and **G296** and **G367–379** an indented end. **G369** is exceptional in having a serrated underside. The next most common tang has parallel sides and either a straight-cut end (**G281**, **G321**, **G331**, **G370–373** and **G378**) or a rounded end (**G288**,

**G374–377**). Three of the latter have large holes close to the end of the tang, perhaps to aid suspension. The straight-cut end, although most common in the 15th and 16th centuries, is found at an earlier date, but the rounded end seems to be restricted to the 15th and 16th centuries. The remaining scale tangs expand equally towards the end and are found from the 13th century onwards. **G263**, **G265**, **G269**, **G289**, **G291** and **G321** have straight-cut ends, **G314** a rounded end, and **G264** a pointed end.

Shoulder plates were frequently riveted or brazed in front of the handles of scale tang knives to finish them off. The plates are riveted on knives **G272**, **G277**, **G281**, **G294**, **G312**, **G321**, **G328**, **G363** and **G388**, and brazed on **G275**, **G291**, **G296**, **G308**, **G315**, **G325**, **G327**, **G331**, **G358**, **G367** and **G371**. X-radiographs have revealed the brazing fluid which held former shoulder plates on **G279**, **G287**, **G295**, **G309**, **G318**, **G323**, **G329** and **G268**. Some riveted shoulder plates may have been lost as well, and a rivet hole close to the choil might imply this. The shoulder plates are variously of copper alloy, silver and leaded pewter, and some are decorated.

End caps are varied in form, some merely being thin sheets of copper alloy, others more substantial cast fittings. End caps survive on **G263**, **G274**, **G309**, **G321**, **G356**, **G365**, **G370**, **G372–376** and **G378**, while nibs on **G265**, **G269**, **G291** and **G358** imply lost caps.

The handles were held in place by rivets, but brazing fluid along the edges of the tangs of **G308** and **G368** may be intentional. It is known on some post-medieval knives and may have held scale and tang together during riveting.

In addition to being shaped, handles were sometimes decorated with pins which did not penetrate the tang. **G321** retains some of these, set in a line between rivets, and **G366** has groups of four small pins randomly ornamenting its bone scales. **G379** has bone scales with an incomplete black letter inscription suggesting that it may be a love-knife.

## The cutler

The medieval cutler made and sold any artefact having a cutter edge, including swords, daggers and other edged weapons, as well as domestic knives. The cutlery trade, in its most organised form, was divided into distinct branches comprising the blacksmith or knifesmith who made the blade and employed the grinder to sharpen it, the hafter who made the handle, the sheather who made the sheath, and the cutler who put the parts together and sold the complete article (Welch 1916, 19; Hayward 1957, 5). Cutlers' marks were regulated by the appropriate Cutlers' Company, and a writ of Edward III of

1365 ordered that every maker of swords, knives or other weapons in the city of London should place his mark on his work (Welch 1916, 35, 248–249).

Cutlers' marks are generally only recognisable on X-radiographs, unless a knife has been conserved, in which case any inlay may have been lost. Forty six medieval knives have cutlers' marks, and of these 34 are inlaid, 10 not inlaid, and 2 (**G163** and **G174**) have pairs of marks, only one of which now retains inlay. Hayward (1957) notes that the cutler inlaid his mark with copper until the mid 16th century, and it is probable that some if not all the plain marks have lost the hammer-welded mark, as must be the case with the two pairs of marks. Four marks have been analysed: **G187** is silver, **G390** copper, **G381** and **G89** probably copper, and **G343** appeared without analysis to be copper or copper alloy. Cutlers' marks start to appear in significant numbers in the 13th century, and continue on uninterrupted.

## Metallurgy

Medieval knife blades were forged in several ways, and because of the high price of steel compared with iron they were usually made by combining the minimum of steel with the maximum of iron consistent with a good cutting edge. Professor R F Tylecote has undertaken much work on the metallurgy of knife blades, and the types of blade structure noted below follow his definitions. Steel can be combined with iron in four ways:

- A: By having a layer of steel covered with two plates of iron in such a way that the steel projects at the cutting edge. Sharpening such a knife will always give a steel edge to the blade.
- B: By welding on a steel strip to the edge of a piece of iron, sometimes made by piling. The steel edge will wear away with sharpening until eventually there is none left.
- C: By using a piece of piled material which consists of alternate layers of iron and steel. Given sufficient heat after welding these layers may be homogenised so that the blade consists of a piece of homogeneous steel.
- D: By having an iron core around which a piece of steel has been wrapped.

Seventy one knives have had their blades examined, and 31 have steel-edged blades, 15 steel cores, 14 piled blades, 7 iron cores, and 4 were wrought iron. The majority of steel-cored blades are from 11th to 13th-century contexts, and the steel-edged type has a general medieval date range but with greater numbers in the 13th to 15th centuries. Piled blades have a similar date range,

although they are fewer in number, and the iron-cored blades are mainly 13th to 16th century. Most of the knives examined have whittle tangs but of the 6 scale tang knives examined, 4 had piled blades, 1 a steel edge, and the other was wrought iron.

## 8.2 Shears

Shears, in more common use during the medieval period than scissors, were used to cut hair and cloth, etc, to shear heep, and in finishing cloth. The shears have been classified according to bow and blade form (Figure 8.6).

### Type 1 shears

Type 1 shears have a plain bow which is no wider than the handle. No medieval example is known, but the type is a well-established pre-Conquest type.

### Type 2 shears

Type 2 shears have a looped bow and a blade with a plain top at the junction between blade and handle. The blade top is curved or slanted on type 2A and straight-cut more or less at right angles to the handle on Type 2B. The more complete Type 2A shears, **G418–442**, vary in length from 95 to 328mm and the blades generally taper to the tip, although those of **G418**, **G423**, **G426** and **G440**, and **G449–451** barely taper and instead the back angles or curves sharply to the tip. **G443–460** are mainly blade and handle fragments, although **G443** retains part of a moulded bow which is otherwise only found on a **G424**. All other bows are entirely plain, with the exception of the internally nibbed base of **G438**. **G431** has blades inlaid with figure-eight shapes which are claimed to be silver but which may be tin. The handles are round or square in section, but **G458** has a hollowed section of a type of found on sheep shears.

**G461–475** are Type 2B shears, the more complete examples between 107 and 285mm in length, although some of the fragmentary blades are for shears of larger size. The smaller shears **G461–463** have sharply angled tips, but the other blades taper more or less evenly. The broad-handled shears **G466** and **G469** are probably sheep shears, as probably were the fragments **G473** and

**G475**, whilst **G474** may be from cloth shears since it has a broad, parallel-sided blade of appropriate width.

## Type 3 shears

Type 3 shears have a looped bow and a moulding at the junction of handle and blade. Type 3A and 3B have single cusps which are combined with a curved or sloping blade top on Type 3A and a straight-cut top on Type 3B. Type 3C has multiple cusps.

**G476–492** are shears of Type 3A, none of which have the large wide blades of the preceding type. Complete pairs range from 92 to 258mm in length, and a significant number have nibbed and sometimes moulded bows. The blades either taper or have sharply angled tips, and **G491** has and inlaid cutler's mark.

The Type 3B shears **G493–499** are all small pairs with blades with angled tips. Complete examples range from 94 to 149mm in length, and several have nibbed or moulded bows.

The Type 3C shears **G500–502** are also small and have restrained multiple cusps. **G500–501** have angled blade tips, **G500** a ground edge.

Shears **G503–544** are too corroded to classify with certainty, although both have looped bows.

## Discussion

Shears of Types 2 and 3 are the normal medieval type, their wide size range reflecting the diverse uses to which they were put. The smaller pairs of shears with cusped blades and moulded bows were probably for personal use, but the plain ones could have had either personal or domestic use cutting hair, thread etc. Some of the larger bladed shears may have been used for cutting cloth, and one fragment may be from a pair of cloth shears, whose use is discussed in Chapter 5. a number of shears with broad handles, frequently of U-shaped section, are probably sheep shears.

Shears of Type 2, as may be expected of the more basic and practical type, were used in greater numbers throughout the medieval period than those of Type 3. Shears of Type 3 are most common in the 13th and 14th centuries, although Type 3C seems to be a late medieval type.

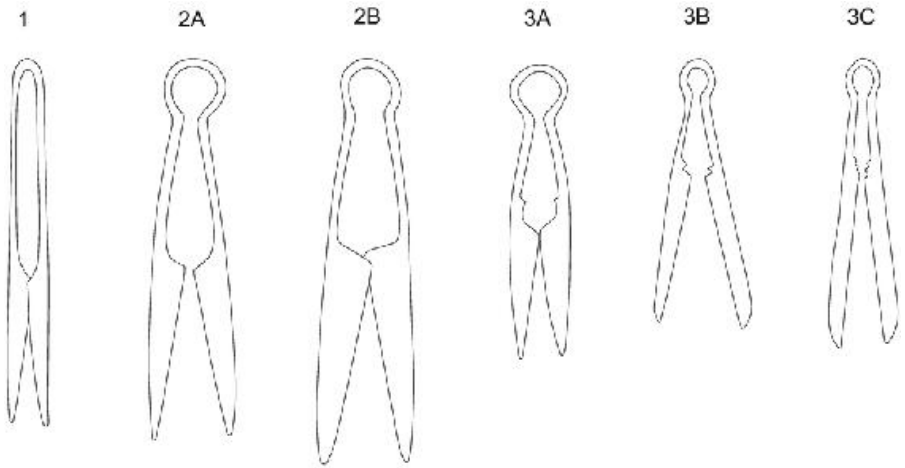



FIGURE 8.6
*Types of medieval shears*

## 8.3 Scissors

Scissors, comprising a pair of blades acting on a central pivot, were less commonly used in the medieval period than shears. Most of the representations noted by Ward Perkins (1967, 151) are associated with craftsmen, particularly glovers, woolmen and tailors, but none of the medieval scissors **G505–521** has the broad blade that might be associated with some of these crafts, although several have suitably long and slender blades. The scissors, the closely dated examples of which come from 13th-century and later contexts, may be classified according to the position of the finger loop.

### Type 1 scissors

Scissors **G505–516** have finger loops set centrally to the handle, and most have slender blades of some length. **G505** and **G516** are the smallest, 81 and 113mm long respectively, but other more or less complete pairs are between 141 and 182mm in length.

### Type 2 scissors

**G517–520** are scissors with asymmetrically set finger loops, and all but **G519** are comparatively small and probably intended for personal or domestic use. **G521** is a blade fragment.

**G1 KNIFE**
Tattershall College, Lincolnshire.
11th century to 1440.
Complete knife mood with whittle tang.
L 147mm.
Excavated by L J keen.

**G2 KNIFE**
Chingley, Kent.
Second half 13th century.
Knife mood, 'blade' incomplete, whittle tang corroded. L 185mm.
Goodall 1975d, 60, fig 27.3.

**G3 KNIFE**
Cambokeels, Durham.
Late 14th to early 16th century.
'Blade' and whittle tang broken. L 124mm.
Hildyard 1949, 199, fig 3.21.

**G4 KNIFE**
Great Yarmouth, Norfolk.
Mid to late 11th century.
Complete. L 108mm.
Rogerson 1976, 162, fig 52.5.

**G5 KNIFE**
Winchester, Hampshire.
Mid to late 11th century.
Complete. L 128mm.
Goodall 1990-16, 842, no. 2660.

**G6 KNIFE**
Winchester, Hampshire.
Mid to late 11th century.
Pattern-welded blade, broken whittle tang.
L 117mm.
Goodall 1990-16, 842, no. 2658.

**G7 KNIFE**
Winchester, Hampshire.
Mid to late 11th century.
Blade and whittle tang broken. L 122mm.
Goodall 1990-16, 842, no. 2659.

**G8 KNIFE**
Winchester, Hampshire.
1067–71.
Whittle tang broken. L 116mm.
Goodall 1990-16, fig 253.2661.

**G9 KNIFE**
King's Lynn, Norfolk.
Late 11th century.
Blade and whittle tang broken. L 111mm.
Goodall and Carter 1977, 293, fig 133.17.

**G10 KNIFE**
Great Yarmouth, Norfolk.
Late 11th or early 12th century.
Whittle tang broken. L 149mm.
Rogerson 1976, 162, fig 52.1.

**G11 KNIFE**
King's Lynn, Norfolk.
*c*1150 –120 0.
Complete. L 161mm.
Goodall and Carter 1977, 293, fig 133.18.

**G12 KNIFE**
Winchester, Hampshire.
12th century.
Complete. L 105mm.
Goodall 1990-16, 842, no. 2662.

**G13 KNIFE**
Winchester, Hampshire.
Early 13th century.
Blade and whittle tang broken. L 120mm.
Goodall 1990-16, fig 253.2663.

**G14 KNIFE**
Winchester, Hampshire.
Early 13th century.
Blade and whittle tang broken. L 122mm.
Goodall 1990-16, fig 253.2664

**G15 KNIFE**
Winchester, Hampshire.
13th century.
Whittle tang and pattern-welded blade broken. Metallurgy: steel-edged blade.
L 112mm.
Goodall 1990-16, 842, no. 2665.

**G16 KNIFE**
Winchester, Hampshire.
Mid to late 13th century.
Blade, incomplete. Metallurgy: piled blade.
L 126mm.
Goodall 1990-16, fig 253.2666.

**G17 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Whittle tang broken. L 97mm.
Goodall 1975a, 79–81, fig 37.1.

**G18 KNIFE**
Winchester, Hampshire.
1050–75.
Blade and whittle tang broken. L 71mm.
Goodall 1990-16, 842, no. 2674.

**G19 KNIFE**
Winchester, Hampshire.
*c*1066–67.
Complete. Metallurgy: steel-cored blade.
L 190mm.
Goodall 1990-16, fig 253.2675.

**G20 KNIFE**
Winchester, Hampshire.

Late 11th–early 12th century.
Whittle tang broken. L 109mm.
Goodall 1990-16, fig 253.2677.

**G21 KNIFE**
Winchester, Hampshire.
Late 11th–12th century.
Blade and whittle tang broken. Metallurgy: steel-edged blade. L 106mm.
Goodall 1990-16, fig 253.2679.

**G22 KNIFE**
Winchester, Hampshire.
Late 11th–early 12th century.
Blade fragment. Metallurgy: pattern-welded blade. L 93mm.
Goodall 1990-16, 842, no. 2678.

**G23 KNIFE**
Winchester, Hampshire.
11th–?12th century.
Whittle tang broken. L 70mm.
Goodall 1990-16, 842, no. 2676.

**G24 KNIFE**
Winchester, Hampshire.
Late 11th–12th century.
Whittle tang broken. Metallurgy: steel-edged blade. L 80mm.
Goodall 1990-16, fig 253.2681.

**G25 KNIFE**
Winchester, Hampshire.
12th–early 13th century.
Blade and whittle tang broken. L 99mm.
Goodall 1990-16, 842, no. 2682.

**G26 KNIFE**
Winchester, Hampshire.
Late 11th–12th century.
Whittle tang broken, cutting edge worn by sharpening. Metallurgy: steel-cored blade.
L 136mm.
Goodall 1990-16, fig 253.2680.

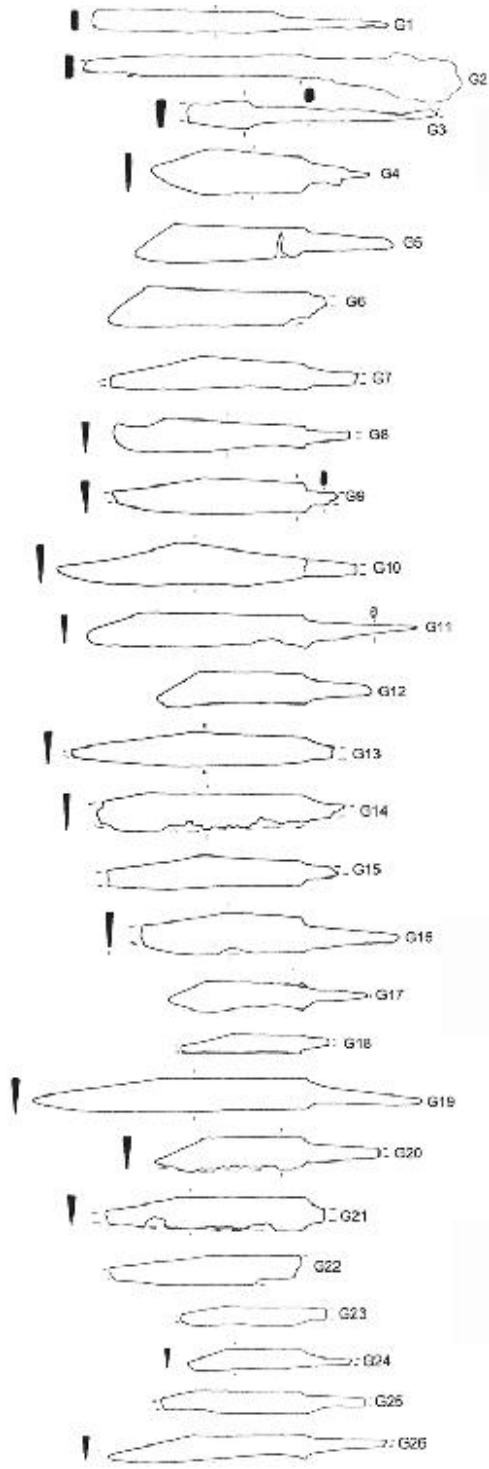



FIGURE 8.7
*Knives*

**G27 KNIFE**
Winchester, Hampshire.
Early to mid 13th century.
Whittle tang broken? Metallurgy: steel-edge blade. L 78mm.
Goodall 1990-16, 842, no. 2683.

**G28 KNIFE**
Winchester, Hampshire.
13th–early 14th century.
Blade and whittle tang broken. L 131mm.
Goodall 1990-16, 842, no. 2685.

**G29 KNIFE**
Winchester, Hampshire.
Mid–late 13th century.
Whittle tang broken. Shallow groove along blade. L 186mm.
Goodall 1990-16, fig 253.2684.

**G30 KNIFE**
Brooklands, Weybridge, Surrey.
*c*1150–1325.
Blade and whittle tang broken. L 145mm.
Goodall 1977d, 73, fig 45.3.

**G31 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade and whittle tang broken. L 100mm.
Excavated by N Macpherson-Grant.

**G32 KNIFE**
Stonar, Kent.
Derived from 13th-, 14th-century layers.
Blade and whittle tang broken. L 95mm.
Excavated by N Macpherson-Grant.

**G33 KNIFE**
Winchester, Hampshire.
14th century.
Whittle tang broken. L 84mm.
Goodall 1990-16, 842, no. 2686.

**G34 KNIFE**
Seacourt, Oxfordshire.
14th century.
Complete. L 153mm.
Biddle 1961–62, 175, fig 29.10, scale 1:4, not 1:3.

**G35 KNIFE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Complete. L 111mm.
Goodall 1979a, 118, fig 61.40.

**G36 KNIFE**
London.
Late 15th–early 16th century.
Complete. l 109mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**G37 KNIFE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Whittle tang broken. L 117mm.
Goodall 1979a, 118, fig 61.38.

**G38 KNIFE**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Blade and whittle tang broken. L 124mm.
Goodall 1980a, 510, fig 265.23.

**G39 KNIFE**
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade tip broken. Metallurgy: steel-edged blade. L 155mm.
Scott 1976, 45, figs.1.e, 6.39b.

**G40 KNIFE**
Castle Acre Castle, Norfolk.
1140s/1150s with derived material. Site founded soon after 1066.
Complete. Back shaped near tip. L 169mm.
Goodall 1982, fig 38, no.25.

**G41 KNIFE**
Lyveden, Northamptonshire.
Second quarter 13th century.
Complete. L 123mm.
Bryant and Steane 1971, 53, fig 13a9.

**G42 KNIFE**
Stonar, Kent.
*c*1225–1275.
Broken whittle tang retains traces of wooden handle. L 184mm.
Excavated by N Macpherson-Grant.

**G43 KNIFE**
Stonar, Kent.
*c*1275–1385.
Whittle tang and blade tip broken. Cutler's mark, not inlaid, on blade. L 128mm.
Excavated by N Macpherson-Grant.

**G44 KNIFE**
Southampton, Hampshire.
1300–1350.
Blade and whittle tang broken. L 164mm.
Harvey 1975b, 282, fig 254.2051.

**G45 KNIFE**
London.
Late 15th–early 16th century.
Complete, whittle tang tip clenched.
L 161mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**G46 KNIFE**
Somerby, Lincolnshire.
15th to mid 16th century.
Complete. L 223mm.
Mynard 1969, 83, fig 12.IW .60.

**G47 KNIFE**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Complete. L 158mm.

Goodall 1980a, 510, fig 265.24.

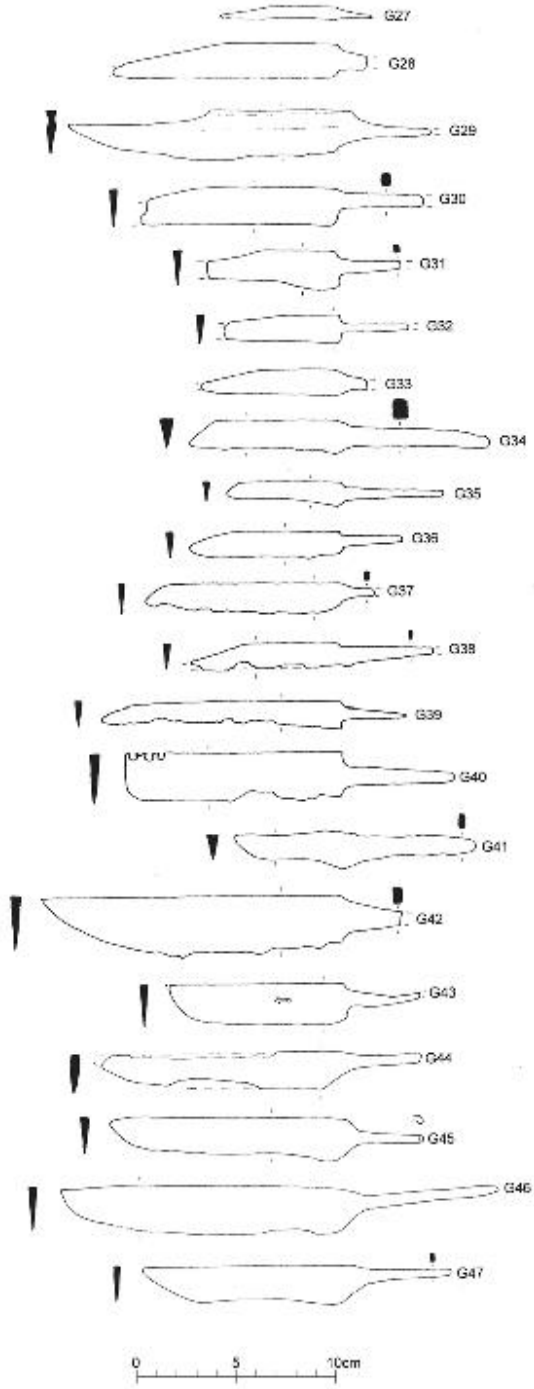


FIGURE 8.8
*Knives*

**G48 KNIFE**
Winchester, Hampshire.
1050–75.
Whittle tang broken. L 78mm.
Goodall 1990-16, fig 254.2703.

**G49 KNIFE**
Sulgrave, Northamptonshire.
Second half 11th century, possibly just post-Conquest.
Whittle tang broken. L 96mm.
Excavated by B K Davison.

**G50 KNIFE**
Sulgrave, Northamptonshire.
Second half 11th century, possibly just post-Conquest.
Whittle tang broken. L 95mm.
Excavated by B K Davison.

**G51 KNIFE**
Winchester, Hampshire.
Late 11th–early 12th century.
Complete. L 132mm.
Goodall 1990-16, fig 254.2713.

**G52 KNIFE**
Winchester, Hampshire.
Late 11th century.
Whittle tang broken. Metallurgy: steel-cored blade. L 65mm.
Goodall 1990-16, 846, no. 2705.

**G53 KNIFE**
Gloucester.
Roman or late 11th, early 12th century.
Whittle tang broken. L 118mm.
Excavated by H Hurst.

**G54 KNIFE**
Oxford.
11th–12th century.
Whittle tang broken. L 76mm.

Jope 1958, 73, fig 24a.

**G55 KNIFE**
Winchester, Hampshire.
11th–?12th century.
Blade fragment, worn by sharpening.
Metallurgy: piled blade. L 73mm.
Goodall 1990-16, fig 254.2708

**G56 KNIFE**
Winchester, Hampshire.
11th–?12th century.
Blade with shallow grooves, broken.
Metallurgy: piled blade. L 126mm.
Goodall 1990-16, fig 254.2707.

**G57 KNIFE**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Whittle tang broken. l 134mm.
Goodall 1987, fig 157.50.

**G58 KNIFE**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Whittle tang broken. L 106mm.
Goodall 1987, fig 156.51.

**G59 KNIFE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Complete. L 112mm.
Goodall 1977f, 47, iron object fig 1.13.

**G60 KNIFE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Blade and whittle tang broken. L 112mm.
Goodall 1977f, 47, iron object fig 1.14.

**G61 KNIFE**
Folkestone, Kent.

Mid 12th century.
Whittle tang broken. L 190mm.
Pitt-Rivers 1883, 463, pl XVIII.7.

**G62 KNIFE**
Castle Acre Castle, Norfolk.
Second half 12th century.
Complete. L 110mm.
Goodall 1982, fig 38, no.28.

**G63 KNIFE**
Winchester, Hampshire.
Early 13th century.
Complete. L 70mm.
Goodall 1990-16, fig 254.2720.

**G64 KNIFE**
Winchester, Hampshire.
Late 11th–early 12th century.
Whittle tang broken. Metallurgy: piled blade. L 84mm.
Goodall 1990-16, 846, no. 2710.

**G65 KNIFE**
Winchester, Hampshire.
Late 11th–early 12th century.
Complete. L 86mm.
Goodall 1990-16, 846, no. 2712.

**G66 KNIFE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th century.
Whittle tang broken. L 96mm.
Excavated by P J Fowler.

**G67 KNIFE**
Winchester, Hampshire.
Late 11th–?mid 12th century.
Whittle tang broken. L 127mm.
Goodall 1990-16, fig 254.2714.

**G68 KNIFE**
Winchester, Hampshire.

Late 11th–early 12th century.
b lade fragment with grooved sides.
Metallurgy: blade pattern-welded and steel-edged. L 121mm.
Goodall 1990-16, fig 254.2709.

**G69 KNIFE**
Old Sarum, Wiltshire.
12th century.
Broken whittle tang retains traces of wooden handle. L 156mm.
Musty and Rahtz 1964, 143, fig 5.4.

**G70 KNIFE**
Eynsford Castle, Kent.
12th century.
Whittle tang broken. L 155mm.
Rigold and Fleming 1973, 105, fig 9.9.

**G71 KNIFE**
Long Buckby, Northamptonshire. Site: mid 12th to early 13th century.
Complete. L 119mm.
Thompson 1956, 60, fig 3.5.

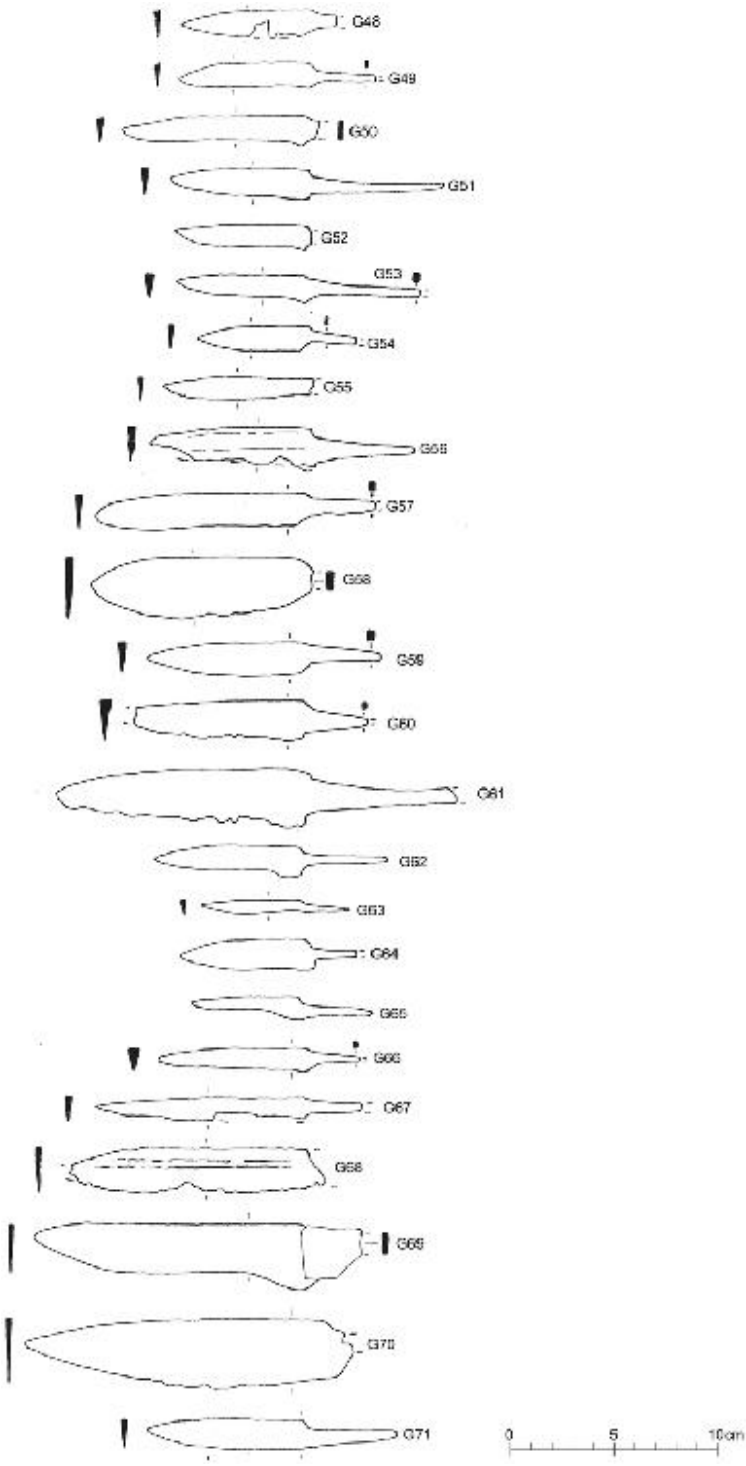



FIGURE 8.9
*Knives*

**G72 KNIFE**
Totnes Castle, Devon.
Late 12th to early 13th century.
Whittle tang broken. L 130mm.
Rigold 1954, 254, fig 9.8a.

**G73 KNIFE**
King's Lynn, Norfolk.
*c*1150–1250.
Complete knife in turned and decorated wooden handle. Whittle tang occupies under half the length of the socket in the handle, which is closed with wooden plugs. L 170mm overall, knife 125mm.
Goodall and Carter 1977, 293, fig 133.20.

**G74 KNIFE**
Oxford.
Late 12th century to *c*1250.
Whittle tang broken. L 103mm.
Goodall 1977e, 142, fig 25.9.

**G75 KNIFE**
Duffield Castle, Derbyshire.
Found with masonry of keep built 1177–90, demolished 1266.
Blade broken. Six copper-alloy heater-shaped plates set at junction between blade and tang. Gaps originally filled by organic plates. L 137mm.
Cox 1887, 173 and figure. For site see Manby 1959; Renn 1973, 174–176.

**G76 KNIFE**
Duffield Castle, Derbyshire.
Found with masonry of keep built 1177–90, demolished 1266.
Blade and whittle tang broken. Series of heater-shaped copper-alloy plates of differing thicknesses between blade and tang. L 194mm.
Cox 1886, 173 and figure. For site see Manby 1959; Renn 1973, 174–176.

**G77 KNIFE**
Winchester, Hampshire.
13th century.
Whittle tang broken. Mettallurgy: steel-cored blade. L 78mm.
Goodall 1990-16, 847, 2729.

**G78 KNIFE**

Winchester, Hampshire.
Mid 12th–early 13th century.
Blade and whittle tang broken. Metallurgy: piled blade. L 87mm.
Goodall 1990-16, 846, no. 2716.

**G79 KNIFE**
Winchester, Hampshire.
12th–early 13th century.
Complete. L 123mm.
Goodall 1990-16, 846, no. 2717.

**G80 KNIFE**
King's Lynn, Norfolk.
11th(?) to 13th century.
Blade and whittle tang broken. L 83mm.
Goodall and Carter 1977, 293, fig 133.26.

**G81 KNIFE**
Southampton, Hampshire.
1200–1225.
Complete. L 150mm.
Harvey 1975b, 277, fig 250.1990.

**G82 KNIFE**
Netherton, Hampshire.
Early 13th century.
Blade and whittle tang broken. L 81mm.
Goodall 1990-28, fig 9.2, no. 97.

**G83 KNIFE**
Lyveden, Northamptonshire.
Second quarter 13th century.
Blade and whittle tang broken. L 93mm.
Bryant and Steane 1971, 53, fig 13a10.

**G84 KNIFE**
Winchester, Hampshire.
Early to mid 13th century.
Complete. L 119mm.
Goodall 1990-16, 846, no. 2721.

**G85 KNIFE**

Winchester, Hampshire.
13th century.
Whittle tang broken. Metallurgy: steel-cored blade. L 91mm.
Goodall 1990-16, 846, no. 2728.

**G86 KNIFE**
Winchester, Hampshire.
Early to mid 13th century.
Complete. Metallurgy: steel-edged blade.
L 126mm.
Goodall 1990-16, 846, no. 2722.

**G87 KNIFE**
Winchester, Hampshire.
13th century.
Whittle tang broken? Metallurgy: steel-cored blade. L 98mm.
Goodall 1990-16, 846, no. 2727.

**G88 KNIFE**
Winchester, Hampshire.
Mid 13th century.
Blade broken. Metallurgy: blade iron only.
L 72mm.
Goodall 1990-16, 846, no. 2723.

**G89 KNIFE**
Winchester, Hampshire.
13th–early 14th century.
Complete. L 68mm.
Goodall 1990-16, 847, no. 2732.

**G90 KNIFE**
Winchester, Hampshire.
13th century (in 19th–20th century phase).
Complete. L 63mm.
Goodall 1990-16, 847, no. 2739.

**G91 KNIFE**
Winchester, Hampshire.
13th century.
Whittle tang broken. Metallurgy: blade pattern-welded and steel-edged. L 94mm.

Goodall 1990-16, 847, no. 2730.

**G92 KNIFE**
Hampton Wafer, Hereford and Worcester.
Site: probably 11th–early 14th century.
Blade and whittle tang broken. L 88mm.
Stanford 1967, 87, fig 7.5.

**G93 KNIFE**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Blade and whittle tang broken. L 136mm.
Goodall 2002, fig 7.1, no. 4.

**G94 KNIFE**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Whittle tang broken. L 88mm.
Goodall 2002, fig 7.1, no. 7.

**G95 KNIFE**
Lyveden, Northamptonshire.
End 13th century to very early 14th century.
Blade tip broken. L 145mm.
Bryant and Steane 1969, 38, fig 17c; 1971.

**G96 KNIFE**
Copt Hay, Tetsworth, Oxfordshire.
Late 13th, 14th century.
Broken whittle tang retains collar from former wooden handle, traces of which survive. L 182mm.
Robinson 1973, 101, fig 23.6.

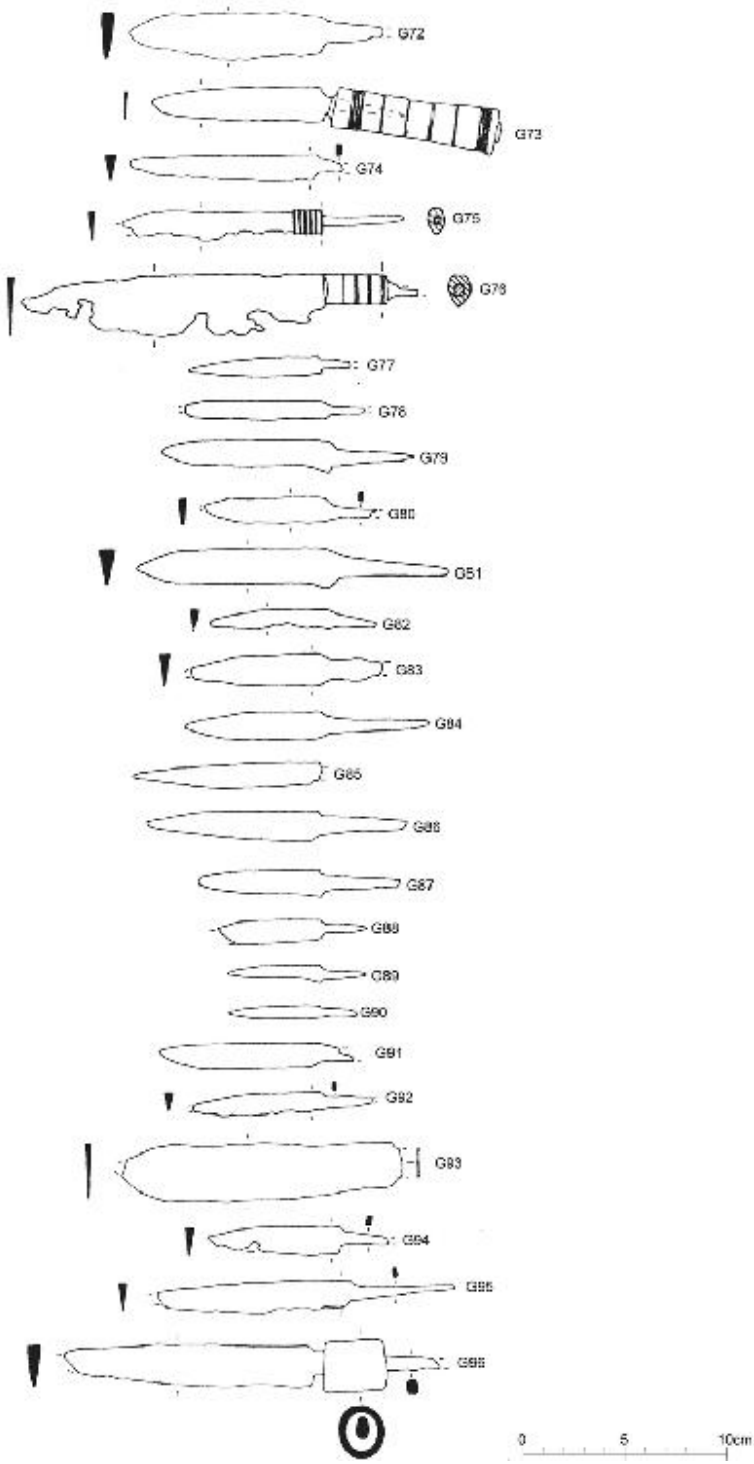



FIGURE 8.10
*Knives*

**G97 KNIFE**
Great Yarmouth, Norfolk.
13th/14th century.
Whittle tang broken. L 111mm.
Rogerson 1976, 162, fig 52.11.

**G98 KNIFE**
Brooklands, Weybridge, Surrey.
1200–1325.
Whittle tang broken. L 78mm.
Goodall 1977d, 73, fig 45.1.

**G99 KNIFE**
Wroughton Copse, Fyfield Down, Wiltshire.
13th century (mid?) to early 14th century.
Blade and whittle tang broken. L 108mm.
Excavated by P J Fowler.

**G100 KNIFE**
Bramber Castle, West Sussex.
Late 13th to 14th century.
Complete. L 91mm.
Barton and Holden 1977, 66, fig 20.7.

**G101 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade and whittle tag broken. inlaid cutler's mark on blade. L 165mm.
Excavated by N Macpherson-Grant.

**G102 KNIFE**
Stonar, Kent.
*c*1275–1385.
Whittle tang broken. L 116mm.
Excavated by N Macpherson-Grant.

**G103 KNIFE**
Stoke Orchard, Gloucestershire.
Site: 12th–14th century.
Whittle tang broken. L 100mm.
Spry 1971, 41, fig 6.A.

**G104 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and whittle tang broken. Cutler's mark, not inlaid. L 134mm.
Goodall 1975a, 79–81, fig 37, 27, pl VII.D.

**G105 KNIFE**
Wintringham, Cambridgeshire.
Around early 14th century.
Blade and whittle tang broken. Inlaid cutler's marks on blade. L 90mm.
Goodall 1977a, 257, fig 43.3.

**G106 KNIFE**
Oxford.
*c*1325–*c*1400.
Complete. L 111mm.
Goodall 1977e, 142, fig 25.10.

**G107 KNIFE**
Oxford.
*c*1325–*c*1400.
Blade and whittle tang broken. Iron hilt plate. Inlaid cutler's mark. L 164mm.
Goodall 1977e, 142, fig 25.12.

**G108 KNIFE**
Winchester, Hampshire.
Late 14th–early 15th century.
Blade and whittle tang broken. Metallurgy: steel-edged blade. L 111mm.
Goodall 1990-16, 947, no. 2735.

**G109 KNIFE**
Winchester, Hampshire.
Late 14th–early 15th century.
Whittle tang broken. L 101mm.
Goodall 1990-16, 847, no. 2736.

**G110 KNIFE**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.
Complete. L 108mm.
O'Neil 1944–45, 42, pl X.37.

**G111 KNIFE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Blade and whittle tang broken. L 123mm.
O'Neil 1944–45.

**G112 KNIFE**
King's Lynn, Norfolk.
*c*1350–1500.
Whittle tang broken. L 145mm.
Goodall and Carter 1977, 293, fig 133.32.

**G113 KNIFE**
Northampton.
15th century, from *c*1410 –20.
Complete. L 82mm.
Goodall *et al* 1979, 268, fig 118.39.

**G114 KNIFE**
Barton Blount, Derbyshire.
Site: late Saxon to late 15th century.
Blade and whittle tang broken. Metallurgy steel-edged blade. L 171mm.
Goodall 1975b, fig 46.2, pl VI.C.

**G115 KNIFE**
Sawtry, Cambridgeshire.
15th to early 16th century.
Blade and whittle tang broken. L 118mm.
Moorhouse 1971b, 85, fig 4.5.

**G116 KNIFE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Cutting edge of blade shaped near tip.
L 140mm.
Goodall 1979a, 118, fig 61.39.

**G117 KNIFE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Blade and whittle tang broken. L 148mm.
Goodall 1979a, 118, fig 62.42.

**G118 KNIFE**
Hen Caerwys, Clwyd.
*c*1450–1520.
Whittle tang broken. L 115mm.
Excavated by G B Leach.

**G119 KNIFE**
Ospringe, Kent.
*c*1483–1550.
Blade and whittle tang broken. L 180mm.
Goodall 1979c, 129, fig 19.7.

**G120 KNIFE**
Winchester, Hampshire.
Late 16th to?17th century.
Whittle tang broken. L 113mm.
Goodall 1990-16, fig 254.2737.

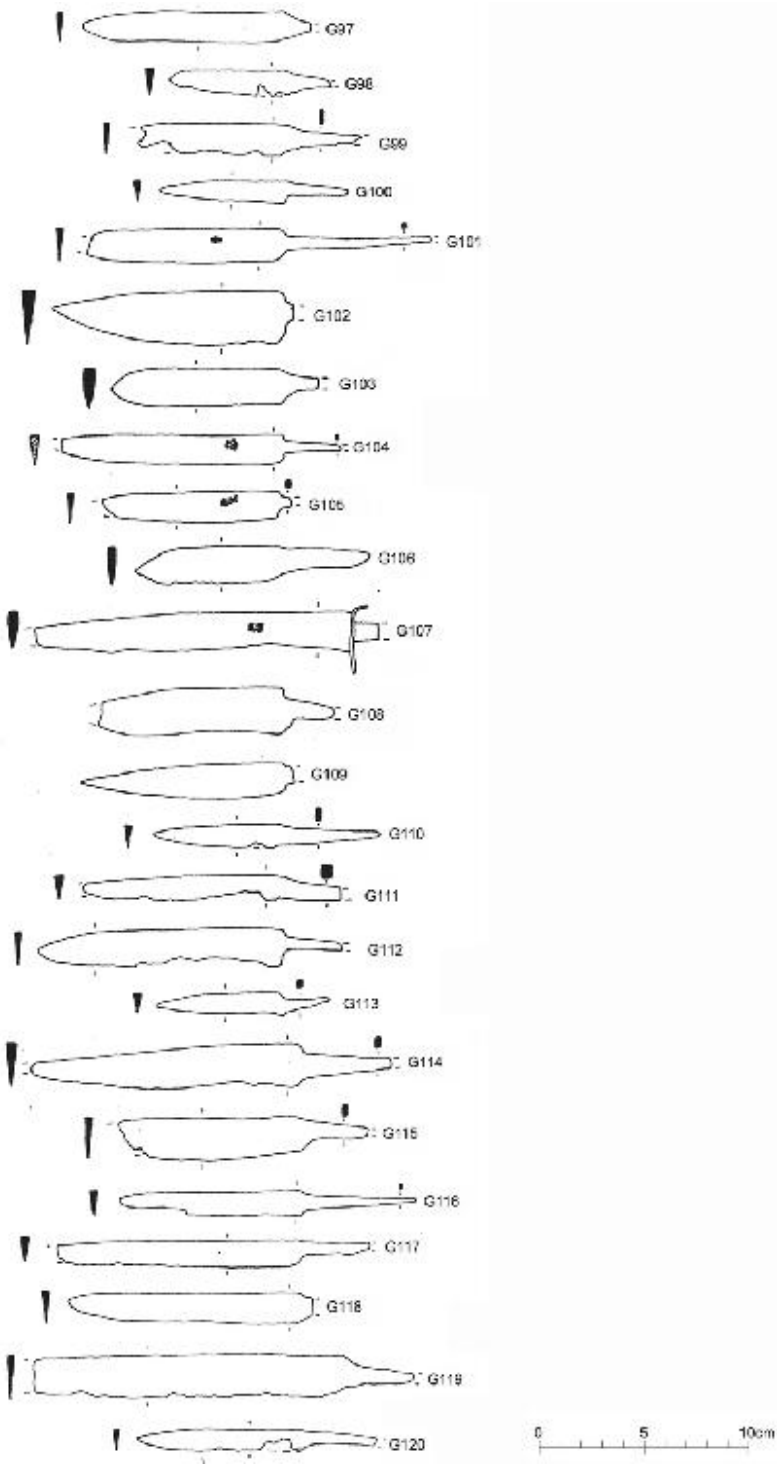



FIGURE 8.11
*Knives*

**G121 KNIFE**
Glastonbury Tor, Somerset.
12th to 16th century (presumably to the Dissolution).
Tang incomplete, cutting edge shaped by sharpening. L 96mm.
Rahtz 1970, 53, fig 23.9.

**G122 KNIFE**
Winchester, Hampshire.
1040–75.
Complete. L 74mm.
Goodall 1990-16, 847, no. 2747.

**G123 KNIFE**
Northolt Manor, Greater London.
1050–1150.
Complete. L 60mm.
Hurst 1961, 288, fig 76.1.

**G124 KNIFE**
Goltho Manor, Lincolnshire.
*c*1100–1125.
Blade broken. L 146mm.
Goodall 1987, fig 157.63.

**G125 KNIFE**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Whittle tang broken. L 102mm.
Goodall 1987, fig 157.57.

**G126 KNIFE**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Blade broken. L 113mm.
Goodall 1987, fig 157.48.

**G127 KNIFE**
Gloucester.
Disturbed late 12th-century layer.
Complete. L 115mm.
Excavated by H Hurst.

**G128 KNIFE**
Winchester, Hampshire.
Late 11th–12th century.
Whittle tang retains part of wooden handle.
L 84mm.
Goodall 1990-16, fig 255.2751.

**G129 KNIFE**
Kidwelly Castle, Dyfed.
Probably 12th century.
Blade and whittle tang broken. L 212mm.
Fox and Radford 1933, 122, fig 11.4.

**G130 KNIFE**
Clough Castle, Co. Down.
*c*1225–50.
Blade tip broken. Conifer wood handle retained on whittle tang. L 186mm.
Waterman 1954, 137, fig 11.9.

**G131 KNIFE**
Winchester, Hampshire.
Early 13th century.
Blade and whittle tang broken. Metallurgy: pattern-welded blade. L 128mm.
Goodall 1990-16, fig 255.2757.

**G132 KNIFE**
King's Lynn, Norfolk.
*c*1050–1250.
Blade and whittle tang broken. Tang forged by folding over iron and drawing out.
L 117mm.
Goodall and Carter 1977, 293, fig 133.27.

**G133 KNIFE**
Northolt Manor, Greater London.
1225–1300.
Whittle tang tip clenched over. L 110mm.
Hurst 1961, 288, fig 76.3.

**G134 KNIFE**
King's Lynn, Norfolk.

*c*1250–1300.
Whittle tang broken. Metallurgy: pattern-welded blade. L 120mm.
Goodall and Carter 1977, 293, fig 133.23.
pl V.C.

**G135 KNIFE**
King's Lynn, Norfolk.
*c*1250–1300.
Blade and whittle tang broken. L 130mm.
Goodall and Carter 1977, 293, fig 133.22.

**G136 KNIFE**
Netherton, Hampshire.
Late 13th century.
Blade tip broken. L 143mm.
Goodall 1990-28, fig 9.2, no. 119.

**G137 KNIFE**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Complete. L 190mm.
Butler 1974, 97, fig 8.16.

**G138 KNIFE**
Winchester, Hampshire.
Late 13th century.
Blade and whittle tang broken. Metallurgy: steel-edged blade. L 102mm.
Goodall 1990-16, 847, no. 2764.

**G139 KNIFE**
Winchester, Hampshire.
Mid 13th century.
Blade broken. Metallurgy: steel-edged blade. L 110mm.
Goodall 1990-16, 847, no. 2759.

**G140 KNIFE**
Winchester, Hampshire.
13th century.
Blade and whittle tang broken. Metallurgy: wrought iron blade. L 131mm.
Goodall 1990-16, fig 255.2765.

**G141 KNIFE**

Wroughton Copse, Fyfield Down, Wiltshire.
13th century (mid?) to early 14th century.
Complete. L 155mm.
Excavated by P J Fowler.

**G142 KNIFE**
Writtle, Essex.
1229–32 to 1277 or 1305.
Complete. L 229mm.
Rahtz 1969b, 87, fig 47.65.

**G143 KNIFE**
South Witham, Lincolnshire.
Late 13th century to 1308–13 or later.
Blade tip broken. L 263mm.
Goodall 2002, fig 7.1, no. 8.

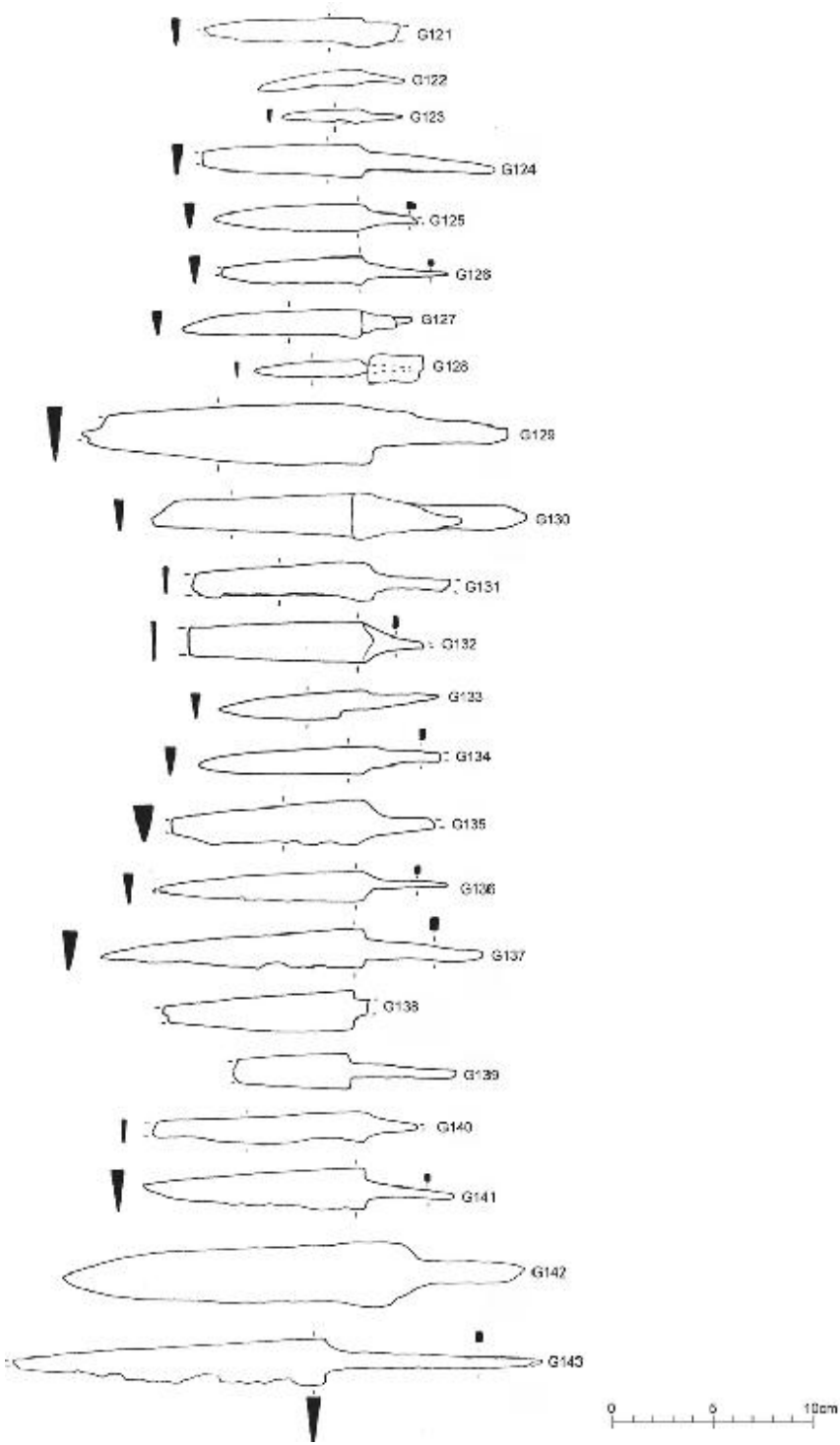



FIGURE 8.12
*Knives*

**G144 KNIFE**
Lyveden, Northamptonshire.
Late 13th century to very early 14th century Complete. L 165mm.
Bryant and Steane 1969, 38, fig 17e; 1971.

**G145 KNIFE**
Netherton, Hampshire.
Late 13th, early 14th century.
Blade and whittle tang broken. L 107mm.
Goodall 1990-28, fig 9.2, no. 115.

**G146 KNIFE**
Kidwelly Castle, Dyfed.
Probably 1275–1320.
Whittle tang broken. L 82mm.
Fox and Radford 1933, 122, fig 11.m.3.

**G147 KNIFE**
Chingley, Kent.
Second half 13th century to mid 14th century.
Whittle tang broken. Metallurgy: steel-edged blade. L 183mm.
Goodall 1975d, 60, 90, fig 27.1.

**G148 KNIFE**
Burton-in-Lonsdale, North Yorkshire.
Later 13th to mid 14th century.
Complete. L 101mm.
Moorhouse 1971a, 95, fig 3.4.

**G149 KNIFE**
London.
?Late 13th to mid 14th century.
Blade, whittle tang and wooden handle broken. L 87mm.
Henig 1974, 189, fig 37.37.

**G150 KNIFE**
London.
Late 13th–mid 14th century.
Blade broken. L 136mm.
Henig 1974, 189, no. 38.

**G151 KNIFE**

Stonar, Kent.
*c*1275–1385.
Whittle tang broken. L 84mm.
Excavated by N Macpherson-Grant.

**G152 KNIFE**
Stonar, Kent.
*c*1275–1385.
Complete. L 168mm.
Excavated by N Macpherson-Grant.

**G153 KNIFE**
Hambleton Moat, Lincolnshire.
1250–1400.
Blade broken. L 202mm.
Butler 1963, 67, fig 14.9.

**G154 KNIFE**
London.
Late 13th–14th century.
Broken blade with three solid copper-alloy rivets set in line close to back and roughly stamped on each face. L 105mm.
Henig 1974, 189, fig 37.35.

**G155 KNIFE**
Copt Hay, Tetsworth, Oxfordshire.
Late 13th, 14th century.
Complete. L 137mm.
Robinson 1973, 101, fig 23.5.

**G156 KNIFE**
Lismahon, Co. Down.
Later 13th or 14th century.
Whittle tang retains part of wooden handle.
L 99mm.
Waterman 1959a, 162, fig 61.3.

**G157 KNIFE**
Lismahon, Co. Down.
Later 13th or 14th century.
Whittle tang broken. L 103mm.
Waterman 1959a, 162, fig 61.2.

**G158 KNIFE**
Barrow Mead, Avon.
Site: 13th–14th century.
Whittle tang broken. L 92mm.
Goodall 1976b, 34, fig 11.15.

**G159 KNIFE**
Winchester, Hampshire.
Mid 13th century.
Whittle tang possibly broken. Metallurgy: blade steel edged. L 135mm.
Goodall 1990-16, fig 255.2761.

**G160 KNIFE**
Lyveden, Northamptonshire.
Site: *c*1200–1500.
Whittle tang broken. L 127mm.
Steane and Bryant 1975, 122, fig 46.49.

**G161 KNIFE**
Rhuddlan, Clwyd.
14th century (?earlier part) or conceivably 1290–1300.
Complete. L 130mm.
Goodall 1994, fig 17.2, no. 27.

**G162 KNIFE**
Wintringham, Cambridgeshire.
Early 14th century.
Blade and whittle tang broken. Inlaid cutler's mark. L 120mm.
Goodall 1977a, 257, fig 43.7.

**G163 KNIFE**
Wintringham, Cambridgeshire.
Around early 14th century.
Whittle tang broken. Cutler's marks, one retaining inlay. L 126mm.
Goodall 1977a, 257, fig 43.6.

**G164 KNIFE**
Wythemail, Northamptonshire.
First half 14th century.
Blade broken. Circular copper-alloy hilt plate with two punched depressions. Handle almost certainly removed before burial, and tang 'cemented' into bone rather than driven into wood. L 200mm.

Hurst and Hurst 1969, 200, fig 60.15.

**G165 KNIFE**
Wintringham, Cambridgeshire.
Early 14th century.
Blade and whittle tang broken. L 150mm.
Goodall 1977a, 257, fig 43.8.

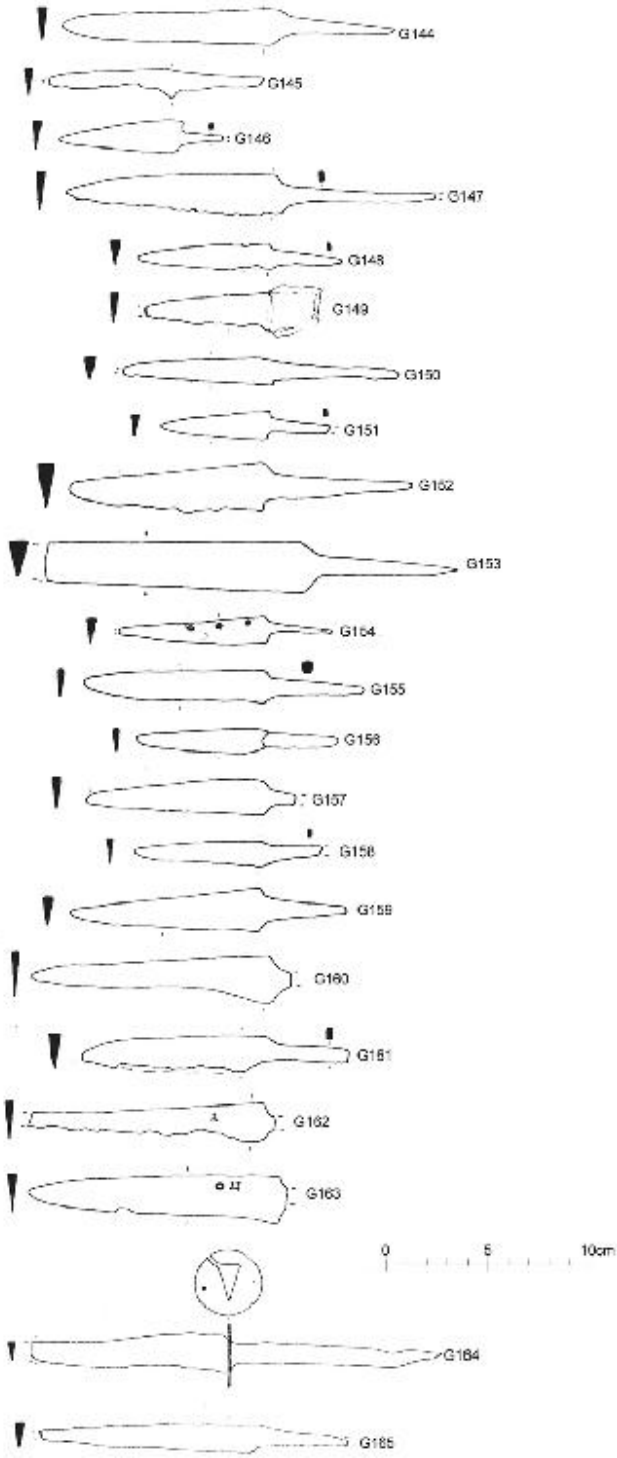



FIGURE 8.13
*Knives*

**G166 KNIFE**
Newbury, Berkshire.
*c*1350–90.
Complete. L 45mm.
Goodall 1997, fig 19, no. 10.

**G167 KNIFE**
Winchester, Hampshire.
14th century.
Complete. L 90mm.
Goodall 1990-16, 848, no. 2768.

**G168 KNIFE**
Winchester, Hampshire.
14th century.
Complete. L 171mm.
Goodall 1990-16, 848, no. 2771.

**G169 KNIFE**
Northampton.
14th century.
Whittle tang broken. End of decorated wooden handle. Cutler's mark on blade with traces of white metal. L 291mm.
Central Museum, Northampton. Found between Bearwood Street and Silver Street.

**G170 KNIFE**
Southampton, Hampshire.
Probably 14th century.
Whittle tang broken. Inlaid cutler's mark.
L 86mm.
Harvey 1975b, 285, fig 255.2068.

**G171 KNIFE**
Brome, Suffolk.
Late 12th to mid 14th century.
Blade broken. L 82mm.
West 1970, 110, fig 12.5.

**G172 KNIFE**
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.

Complete. Cutler's mark, not inlaid.
L 143mm.
Goodall 1977a, 257, fig 43.9.

**G173 KNIFE**
Goltho, Lincolnshire.
Croft B: late Saxon to late 14th century.
Blade and whittle tang broken. Metallurgy: steel-cored blade. L 172mm.
Goodall 1975a, 79–82, fig 37.29.

**G174 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Whittle tang broken. Cutler's marks on blade, one inlaid. L 99mm.
Goodall 1975a, 79–81, fig 37.25.

**G175 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade broken. Metallurgy: steel-edged blade. L 120mm.
Goodall 1975a, 79–82, fig 37.15.

**G176 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and whittle tang broken. Metallurgy: iron-cored blade. L 123mm.
Goodall 1975a, 79–82, fig 37.22.

**G177 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Whittle tang broken. Metallurgy: steel-cored blade. L 150mm.
Goodall 1975a, 79–82, fig 37.14.

**G178 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th to early 15th century.
Complete. Groove close to back of one side of blade. Metallurgy: piled blade. L 151mm.
Goodall 1975a, 79–82, fig 37.16.

**G179 KNIFE**

Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and whittle tang broken. Metallurgy: iron-cored blade. L 162mm.
Goodall 1975a, 79–82, fig 37.18.

**G180 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade broken. Metallurgy: iron-cored blade. L 180mm.
Goodall 1975a, 79–82, fig 37.19.

**G181 KNIFE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and whittle tang broken. Metallurgy: steel-cored blade. L 176mm.
Goodall 1975a, 79–82, fig 37.28.

**G182 KNIFE**
Winchester, Hampshire.
14th century.
Blade and whittle tang broken. Metallurgy: steel-edged blade. L 71mm.
Goodall 1990-16, 848, no. 2769.

**G183 KNIFE**
Grenstein, Norfolk.
Late 14th, 15th century.
Blade and whittle tang broken. L 180mm.
Goodall 1980c, fig 76, no. 1.

**G184 KNIFE**
Grenstein, Norfolk.
Late 14th, 15th century.
Blade broken. L 96mm.
Goodall 1980c, fig 76, no. 3.

**G185 KNIFE**
Oxford.
Late 14th to mid 15th century.
Whittle tang broken. L 181mm.
Goodall 1976c, 298, fig 26.2.

**G186 KNIFE**

Lyveden, Northamptonshire.
1350–1450.
Blade broken. Cutler's mark, not inlaid.
L 111mm.
Steane and Bryant 1975, 121, fig 46.20.

**G187 KNIFE**
Goltho, lincolnshire.
Late 14th, early 15th century.
Blade and whittle tang broken. Cutler's
mark inlaid with silver. Metallurgy: iron-cored blade. L 126mm.
Goodall 1975a, 79–82, fig 37.20, pl VII.A.

**G188 KNIFE**
Wallingstones, Hereford and Worcester.
1300–1325 to 1500.
Whittle tang broken. L 141mm.
Bridgewater 1970–72, 104, no. 68.

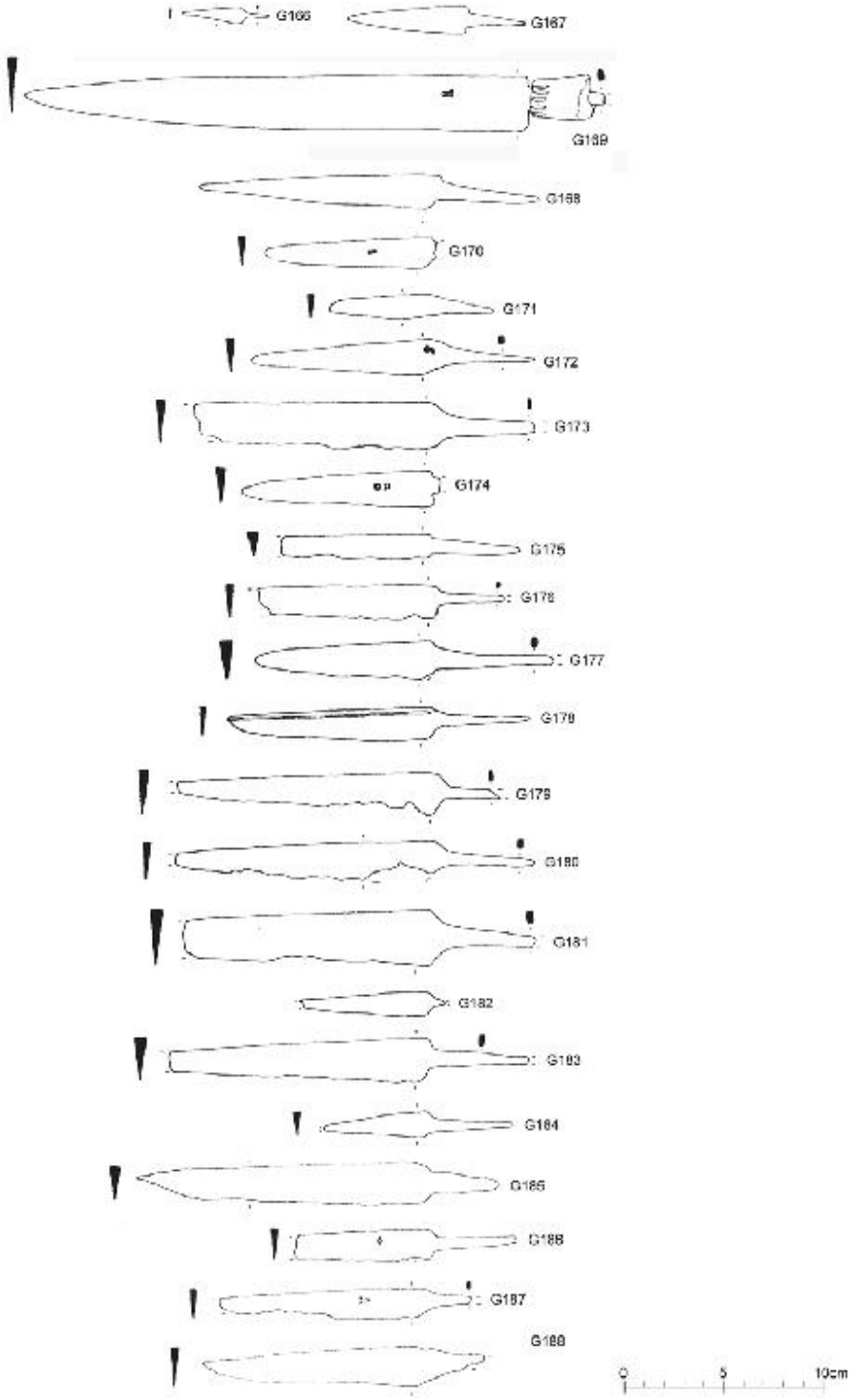



FIGURE 8.14
*Knives*

**G189 KNIFE**
Baginton, Warwickshire.
14th–15th century.
Complete. L 212mm.
Wilkins 1975, 126, fig 8.13.

**G190 KNIFE**
Newbury, Berkshire.
Mid 15th century.
Blade and whittle tang broken. Inlaid groove and cutler's mark on one side of blade.
L 153mm.
Goodall 1997, fig 19, no. 11.

**G191 KNIFE**
Winchester, Hampshire.
15th century.
Blade and whittle tang broken. Metallurgy: steel-cored blade. L 100mm.
Goodall 1990-16, 850, no. 2774.

**G192 KNIFE**
Lyveden, Northamptonshire.
15th century.
Blade broken, whittle tang tip clenched.
L 136mm.
Steane and Bryant 1975, 121, fig 46.35.

**G193 KNIFE**
Lyveden, Northamptonshire.
15th century.
Blade and whittle tang broken. Damaged, oval, copper-alloy hilt plate. Inlaid cutler's mark. L 125mm.
Steane and Bryant 1975, 122, fig 46.51.

**G194 KNIFE**
Barton Blount, Derbyshire.
15th century.
Blade and whittle tang broken. metallurgy: steel-edged blade. L 164mm.
Goodall 1975b, 96–97, fig 46.1.

**G195 KNIFE**
Winchester, Hampshire.

16th century.
Blade broken. metallurgy: steel-edged blade. L 171mm.
Goodall 1990-16, 850, no. 2779.

**G196 KNIFE**
Theodoric's Hermitage, Margam, West
Glamorgan.
Site: 13th–15th century.
Whittle tang broken. L 172mm.
National Museum of Wales, Cardiff, 49.140.
15–18.

**G197 KNIFE**
Somerby, Lincolnshire.
11th to 15th century.
Blade and whittle tang incomplete. L 298mm.
Mynard 1969, 83, fig 12.IW70.

**G198 KNIFE**
London.
Late 15th–early 16th century.
Blade and whittle tang broken. L 130mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**G199 KNIFE**
Ospringe, Kent.
*c*1483–1550.
Blade and whittle tang broken. L 97mm.
Goodall 1979c, 129, fig 19.6.

**G200 KNIFE**
Ospringe, Kent.
*c*1483–1550.
Blade broken. L 194mm.
Goodall 1979c, 129, fig 19.8.

**G201 KNIFE**
Somerby, Lincolnshire.
Derived from 15th to mid 16th-century occupation.
Blade and whittle tang broken. L 293mm.
Mynard 1969, 83, fig 12.IW63.

**G202 KNIFE**
Winchester, Hampshire.
Late 15th to early 16th century.
Blade and whittle tang broken. metallurgy: piled blade. L 70mm.
Goodall 1990-16, 850, no. 2775.

**G203 KNIFE**
Pleshey Castle, Essex.
Mid 13th/early 14th century to early/mid 16th century or later.
Blade and whittle tang broken. Non-ferrous shoulder plates. L 122mm.
Goodall 1977c, 175–176, fig 38.4.

**G204 KNIFE**
West Hartburn, Durham.
Site: 13th–16th century.
Blade and whittle tang broken. L 140mm.
Excavated by L Still and A Pallister.

**G205 KNIFE**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Complete. L 232mm.
Goodall 1980a, 510, fig 265.25.

**G206 KNIFE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Blade and whittle tang broken. L 106mm.
Goodall 1977f, 47, iron object fig 1.15.

**G207 KNIFE**
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.
Blade broken. L 113mm.
Goodall 1977a, 257, fig 43.10.

**G208 KNIFE**
London.
Around later 14th century.
Blade and whittle tang broken. L 115mm.
Henig 1974, 189, fig 37.40.

**G209 KNIFE**
London.
Around later 14th century.
Blade and whittle tang broken. L 92mm.
Henig 1974, 189, fig 37.36.

**G210 KNIFE**
Northampton.
Later 15th century.
Blade and whittle tang broken. L 137mm.
Goodall *et al* 1979, 268, fig 118.40.

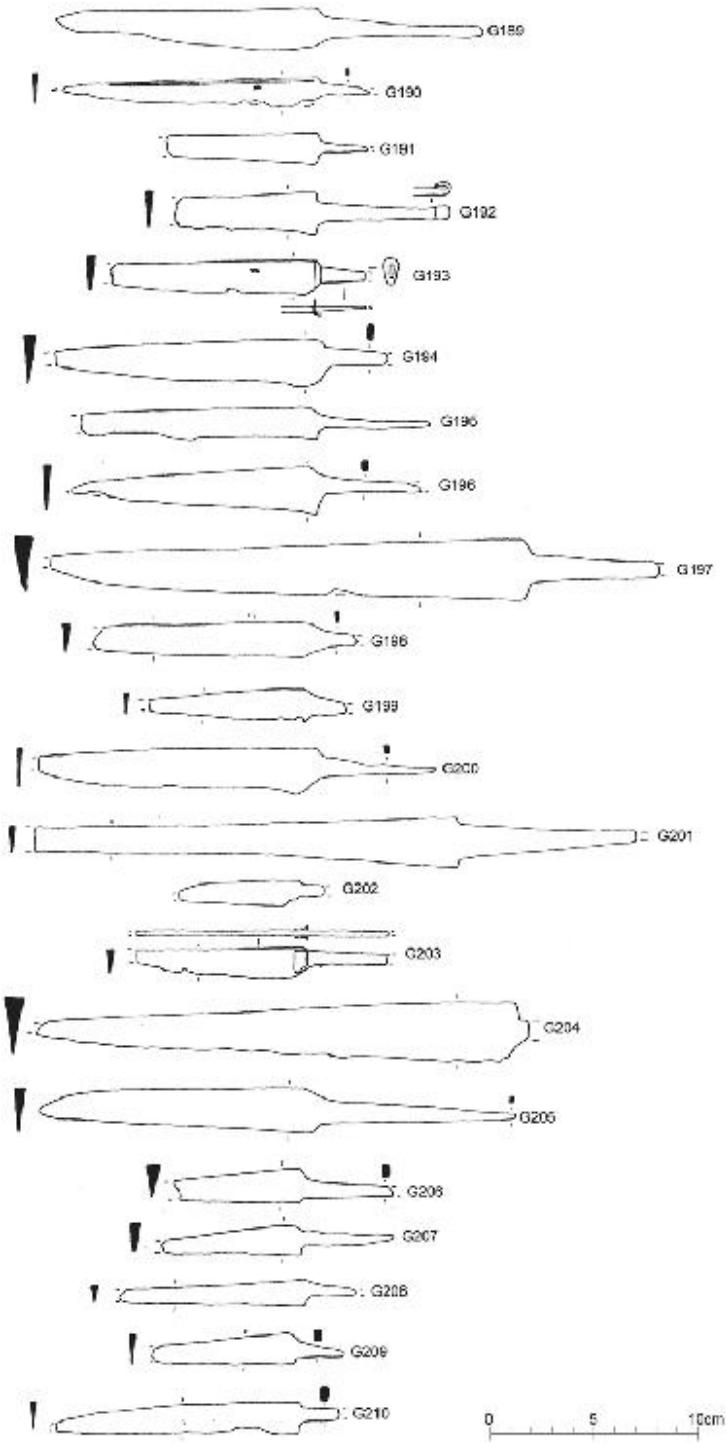



FIGURE 8.15
*Knives*

**G211 KNIFE**
Theodoric's Hermitage, Margam, West Glamorgan.
Site: 13th–15th century.
Complete. L 145mm.
National Museum of Wales, Cardiff, 49.140.
15–18.

**G212 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade and whittle tang broken. L 89mm.
Excavated by N Macpherson-Grant.

**G213 KNIFE**
Cheddar, Somerset.
Later 13th century to *c*1600.
Broken whittle tang retains traces of wooden handle. L 149mm.
Goodall 1979d, 266, fig 90.199.

**G214 KNIFE**
Lyveden, Northamptonshire.
*c*1200–1350.
Blade and whittle tang broken. L 155mm.
Steane and Bryant 1975, 121, fig 46.23.

**G215 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade and tang broken. L 83mm.
Excavated by N Macpherson-Grant.

**G216 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade and whittle tang broken. Inlaid cutler's marks on blade. L 144mm.
Excavated by N Macpherson-Grant.

**G217 KNIFE**
Kiln Combe, Bullock Down, East Sussex.
Site: 12th–15th century.
Blade and whittle tang broken. L 94mm.

Excavated by D J Freke.

**G218 KNIFE**
Gloucester.
Mid 11th century.
Blade broken. L 61mm.
Excavated by H Hurst.

**G219 KNIFE**
Gloucester.
Probably mid 11th century.
Blade and whittle tang broken. L 99mm.
Excavated by H Hurst.

**G220 KNIFE**
Winchester, Hampshire.
Late 11th–early 12th century.
Blade and tang broken. L 55mm.
Goodall 1990-16, 850, no. 2787.

**G221 KNIFE**
Winchester, Hampshire.
11th century.
Whittle tang broken. Butting against the shoulder, and originally fronting the handle, are a number of sheet metal plates formerly separated by organic plates. L 154mm.
Goodall 1990-16, fig 255.2748.

**G222 KNIFE**
Newbury, Berkshire.
*c*1080 –1110.
Whittle tang broken. L 142mm.
Goodall 1997, fig 19, no. 9.

**G223 KNIFE**
Gloucester.
Probably mid 12th century.
Complete. L 97mm.
Excavated by H Hurst.

**G224 KNIFE**
Netherton, Hampshire.

Mid to late 12th century.
Blade and whittle tang incomplete.
L 180mm.
Goodall 1990-28, fig 9.1, no. 96.

**G225 KNIFE**
Winchester, Hampshire.
11th–?mid 12th century.
Whittle tang broken. L 72mm.
Goodall 1990-16, 850, no. 2788.

**G226 KNIFE**
Winchester, Hampshire.
Late 11th–12th century.
Whittle tang broken. Metallurgy: blade steel edged. L 135mm.
Goodall 1990-16, fig 255.2790.

**G227 KNIFE**
Winchester, Hampshire.
Late 11th–12th century.
Blade and whittle tang broken. L 161mm.
Goodall 1990-16, fig 255.2789.

**G228 KNIFE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th century (?).
Blade and whittle tang broken. Non-ferrous pointed oval hilt plate. L 66mm.
Excavated by P J Fowler.

**G229 KNIFE**
Winchester, Hampshire.
Early 13th century.
Blade broken. L 86mm.
Goodall 1990-16, 850, no. 2794.

**G230 KNIFE**
King's Lynn, Norfolk.
*c*1150–1250.
Whittle tang broken. L 105mm.
Goodall and Carter 1977, 293, fig 133.21.

**G231 KNIFE**
Duffield Castle, Derbyshire.
Found with masonry of keep built 1177–90, demolished 1266.
Complete. L 185mm.
Cox 1887, 173 and figure. For site see Manby 1959; Renn 1973, 174–176.

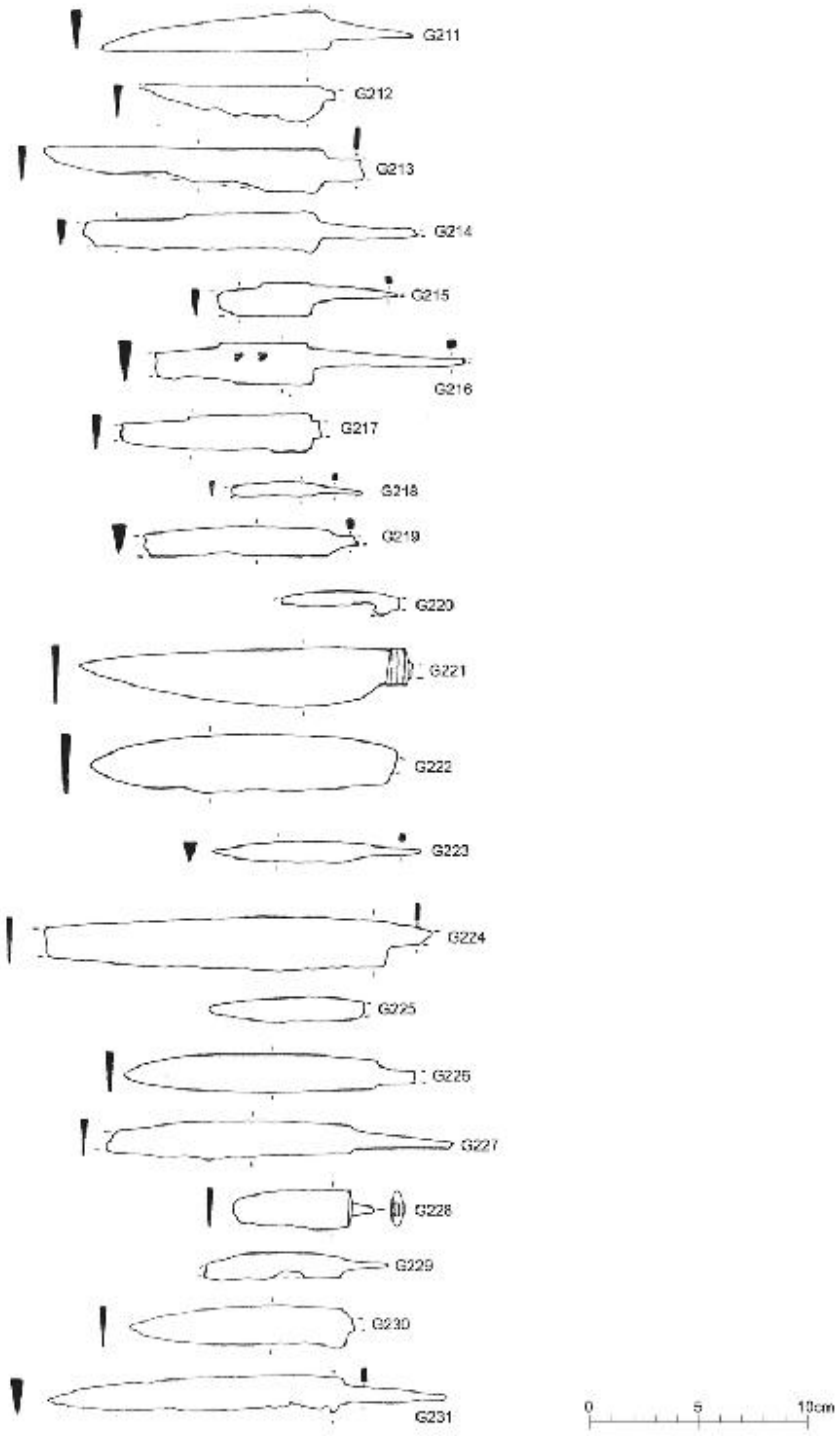



FIGURE 8.16
*Knives*

**G232 KNIFE**
Duffield Castle, Derbyshire.
Found with masonry of keep built 1177–90, demolished 1266.
Blade and whittle tang broken. Series of heater-shaped copper-alloy plates at junction of blade and tang, two 7.5 and 7mm thick, the others sheet metal. Gaps originally filled by organic plates. L 137mm.
Cox 1887, 173 and figure. For site see Manby 1959; Renn 1973, 174–176.

**G233 KNIFE**
Waltham Abbey, Essex.
Late 12th, early 13th century.
Complete. L 153mm.
Excavated by P J Huggins. From Romeland.

**G234 KNIFE**
Netherton, Hampshire.
Late 12th to mid 13th century.
Complete. L 117mm.
Goodall 1990-28, fig 9.1, no. 98.

**G235 KNIFE**
Netherton, Hampshire.
Late 12th–mid 13th century.
Blade and whittle tang broken. L 88mm.
Goodall 1990-28, fig 9.1, no. 99.

**G236 KNIFE**
Winchester, Hampshire.
Late 12th–early 13th century.
Complete. L 93mm.
Goodall 1990-16, fig 255.2792.

**G237 KNIFE**
Winchester, Hampshire.
Early 13th century.
Whittle tang broken. L 84mm.
Goodall 1990-16, fig 255.2793.

**G238 KNIFE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Whittle tang broken. L 113mm.

Excavated by P J Fowler.

**G239 KNIFE**
Winchester, Hampshire.
Late 12th–early 13th century.
Blade broken across base of whittle tang.
Decorated copper-alloy strip along back of blade. L 118mm.
Goodall 1990-16, fig 255.2791.

**G240 KNIFE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Complete. L 172mm.
Excavated by P J Fowler.

**G241 KNIFE**
King's Lynn, Norfolk.
1200–1250.
Blade and whittle tang broken. L 119mm
Goodall and Carter 1977, 293, fig 133.19

**G242 KNIFE**
London.
Late 13th–mid 14th century.
Blade broken whittle tang retains traces of wooden handle and is clenched and broken. L 116mm.
Henig 1974, 189, no. 41.

**G243 KNIFE**
Wharram Percy, North Yorkshire.
Late 13th to late 14th century.
Blade broken. L 71mm.
Goodall 1979a, 118, fig 61.35.

**G244 KNIFE**
Bramber Castle, West Sussex.
Late 13th, 14th century.
Blade and whittle tang broken. L 116mm.
Barton and Holden 1977, 66, fig 20.5.

**G245 KNIFE**
Stonar, Kent.

Derived from deposits of *c*1275–1385.
Blade and whittle tang broken. L 167mm.
Excavated by N Macpherson-Grant.

**G246 KNIFE**
King's Lynn, Norfolk.
13th–14th century.
Whittle tang broken. Inlaid non-ferrous wire decoration along back and each side of blade (not drawn) takes form of wavy line with alternating scrolls within each curve. a long the back there are additionally bar stops between the curves. L 105mm.
Goodall and Carter 1977, 293, fig 133.29.

**G247 KNIFE**
Griff (Sudeley Castle), Warwickshire.
Site: 13th to 14th century.
Blade and whittle tang broken. L 113mm.
West 1968, 87, fig 4.6.

**G248 KNIFE**
Brooklands, Weybridge, Surrey.
*c*1150–1325.
Blade and whittle tang broken. Two trapezoidal plates, the front of iron, the rear of copper alloy, survive at the junction of blade and tang. L 90mm.
Goodall 1977d, 73, fig 45.4.

**G249 KNIFE**
Winchester, Hampshire.
13th–14th century.
Blade and whittle tang broken. L 65mm.
Goodall 1990-16, 851, no. 2795.

**G250 KNIFE**
Woodperry, Oxfordshire.
Site: 12th to 14th century.
Cutting edge damaged. L 117mm.
Wilson 1846.

**G251 KNIFE**
Badby, Northamptonshire.
Mid to late 14th century.

Whittle tang broken. L 76mm.
Excavated by Mrs M Gray.

**G252 KNIFE**
London.
Around later 14th century.
Blade and whittle tang broken. L 151mm.
Henig 1974, 189, fig 37.42.

**G253 KNIFE**
Bramber Castle, West Sussex.
14th century.
Complete. L 223mm.
Barton and Holden 1977, 66, fig 20.4.

**G254 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade broken. Metallurgy: steel-cored blade. L 137mm.
Goodall 1975a, 79–82, fig 37.11.

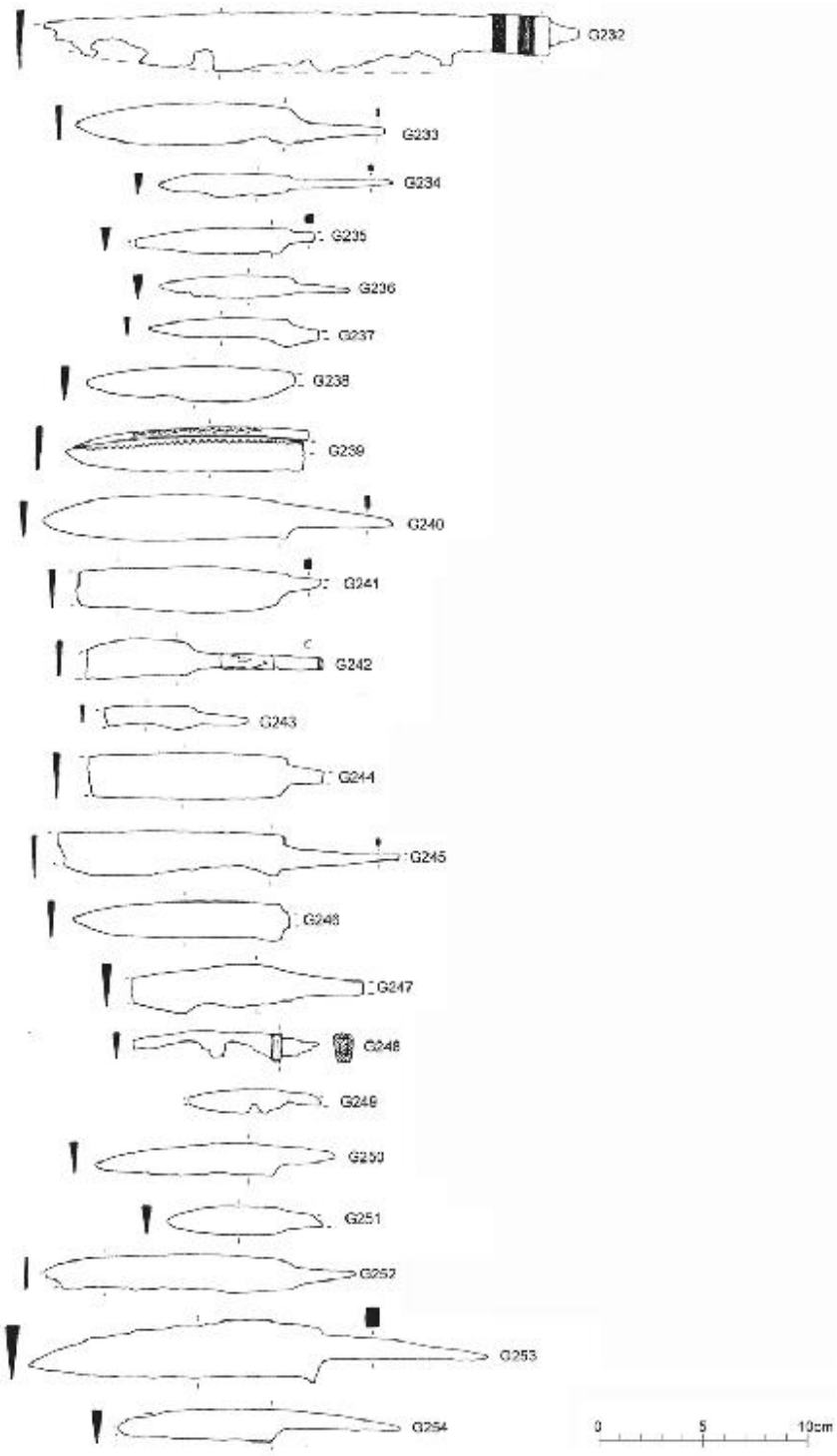



FIGURE 8.17
*Knives*

**G255 KNIFE**
Winchester, Hampshire.
15th century.
Whittle tang broken, blade damaged.
L 179mm.
Goodall 1990-16, fig 255.2797.

**G256 KNIFE**
Faxton, Northamptonshire.
Site: 12th–15th century.
Whittle tang broken. L 84mm.
Excavated by L A S Butler.

**G257 KNIFE**
Faxton, Northamptonshire.
Site: 12th–15th century.
Blade broken. L 122mm.
Excavated by L A S Butler.

**G258 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade broken. Metallurgy: steel-edged blade. L 90mm.
Goodall 1975a, 79–82, fig 37.6.

**G259 KNIFE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Blade broken. L 141mm.
O'Neil 1944–45, 42, pl X.35.

**G260 KNIFE**
St Catharine's Hill, Winchester, Hampshire.
Site: early 12th century to 1538–40.
Blade and whittle tang broken. L 152mm.
Hawkes *et al* 1930, 246, fig 29.i 24.

**G261 KNIFE**
Winchester, Hampshire.
Mid 13th–?14th century.
Blade and scale tang broken. L 109mm.
Goodall 1990-16, fig 257.2816.

**G262 KNIFE**
Rayleigh Castle, Essex.
*c*1070–*c*1350.
Complete. L 222mm.
Reader 1913, 169, fig 4.1; Browne 1913. For site see also Helliwell and Macleod 1965.

**G263 KNIFE**
Barrow mead, Avon.
13th–14th century.
Blade broken. Iron rivets in scale tang and nib with copper-alloy cap. L 236mm.
Goodall 1976b, 34, fig 11.16.

**G264 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade broken, four rivets in tang. L 188mm.
Excavated by N Macpherson-Grant.

**G265 KNIFE**
Barrow mead, Avon.
14th century.
Blade broken. Iron rivets in scale tang with nib for lost cap. L 209mm.
Goodall 1976b, 34, fig 11.14.

**G266 KNIFE**
Winchester, Hampshire.
Late 14th–early 15th century.
Scale tang broken. Inlaid cutler's mark.
L 203mm.
Goodall 1990-16, fig 257.2819.

**G267 KNIFE**
Huish, Wiltshire.
Site: 12th–15th century.
Scale tang broken. L 185mm.
Shortt 1972, 118, fig 3.14.

**G268 KNIFE**
Barton Blount, Derbyshire.
Site: late Saxon to late 15th century.

Blade and scale tang broken. Iron rivets.
Metallurgy: steel-edged blade. L 159mm.
Goodall 1975b, 96–97, fig 46.3.

**G269 KNIFE**
The Hamel, Oxford.
Late 15th/early 16th century.
Blade broken. Nib for cap on end of scale tang. L 233mm.
Goodall 1980d, fig 29, no.3.

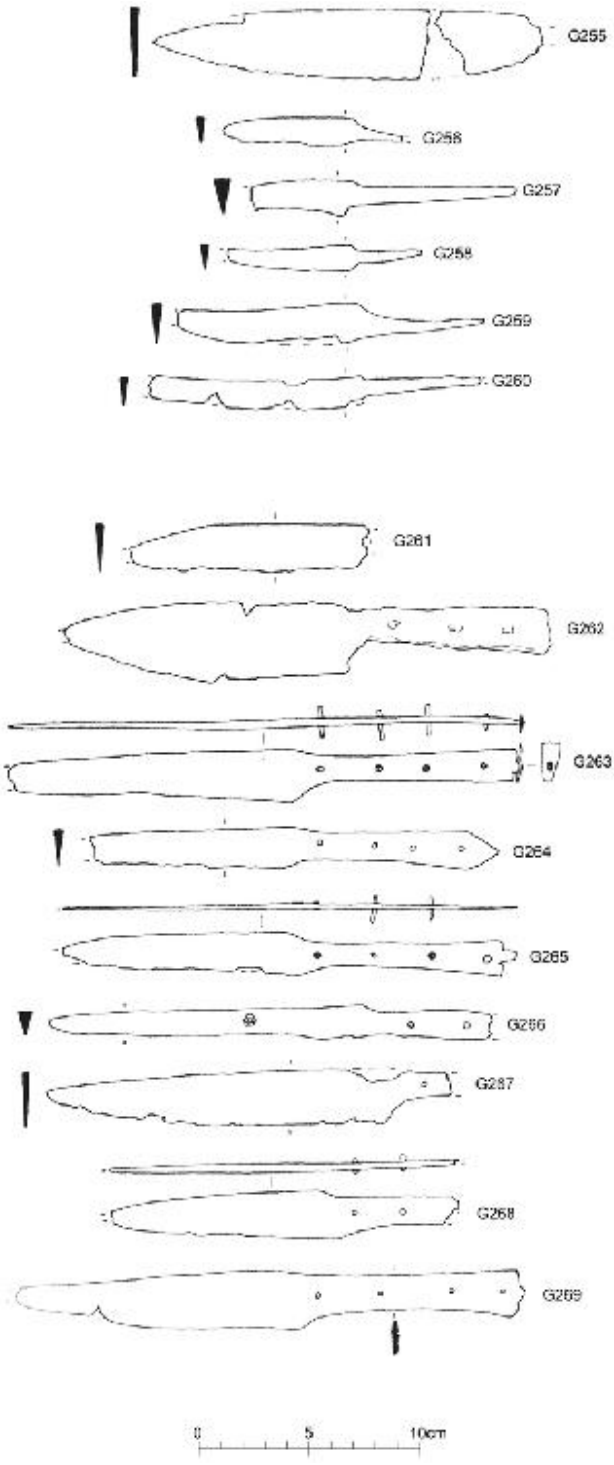



FIGURE 8.18
*Knives*

**G270 KNIFE**
Gomeldon, Wiltshire.
Late 13th to 14th century.
Blade and scale tang broken. L 114mm.
Musty and Algar 1986.

**G271 KNIFE**
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.
Blade and scale tang broken. Iron rivets.
L 146mm.
Goodall 1977a, 257, fig 43.14.

**G272 KNIFE**
Woodperry, Oxfordshire.
12th–14th century.
Blade and scale tang broken. Non-ferrous shoulder plate. L 144mm.
Wilson 1846.

**G273 KNIFE**
Seacourt, Oxfordshire.
14th century.
Blade tip and scale tang broken. L 138mm.
Biddle 1961–62, 175, fig 29.7.

**G274 KNIFE**
Grenstein, Norfolk.
Late 14th, 15th century.
Blade broken. Broken iron cap on end of scale tang. L 184mm.
Goodall 1980c, fig 76, no. 9.

**G275 KNIFE**
Grenstein, Norfolk.
Late 14th, 15th century.
Blade and scale tang broken. Non-ferrous shoulder plates. L 176mm.
Goodall 1980c, fig 76, no. 8.

**G276 KNIFE**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Blade and scale tang broken. L 139mm.
Shortt 1972, 118, fig 3.16.

**G277 KNIFE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Blade and scale tang broken. Copper-alloy riveted shoulder plates, one with wood graining from former handle. L 109mm.
Goodall 1988, fig 74.19; Borenius and Charlton 1936.

**G278 KNIFE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Blade and scale tang broken. Three tubular copper-alloy rivets. L 192mm.
Goodall 1988, fig 74.16; b orenius and Charlton 1936.

**G279 KNIFE**
Northampton.
Site: Middle Saxon to *c*1500.
Blade and scale tang broken. Inlaid cutler's mark and brazing fluid from former shoulder plates on blade. L 104mm.
Goodall *et al* 1979, 268, fig 118.51.

**G280 KNIFE**
Wharram Percy, North Yorkshire.
Early 15th century.
Broken scale tang. L 107mm.
Goodall 1979a, 118, fig 62.44.

**G281 KNIFE**
Lyveden, Northamptonshire.
15th century,?late.
Blade broken. Copper-alloy rivets, non-ferrous shoulder plates. L 205mm.
Steane and Bryant 1975, 122, fig 46.47.

**G282 KNIFE**
Waltham Abbey, Essex.
Probably 15th century.
Blade and scale tang broken. Riveted
non-ferrous shoulder plates.
Inlaid cutler's mark. L 188mm.
Excavated by P J Huggins.

**G283 KNIFE**
Wharram Percy, North Yorkshire.

Late 15th to early 16th century.
Scale tang broken. L 106mm.
Goodall 1979a, 118, fig 62.48.

**G284 KNIFE**
London.
Late 15th to early 16th century.
Broken scale tang, rivet holes obscured.
L 190mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**G285 KNIFE**
Hen Caerwys, Clwyd.
Site: *c*1450–1520.
Blade and scale tang broken. L 144mm.
Excavated by G B Leach.

**G286 KNIFE**
Ospringe, Kent.
*c*1483–1550.
Blade and scale tang broken. L 133mm.
Goodall 1979c, 129, fig 19.12.

**G287 KNIFE**
Ospringe, Kent.
*c*1483–1550.
Scale tang broken. Brazing fluid from former shoulder plates. L 163mm.
Goodall 1979c, 129, fig 19.13.

**G288 KNIFE**
Ospringe, Kent.
*c*1483–1550.
Complete. L 249mm.
Goodall 1979c, 129, fig 19.11.

**G289 KNIFE**
Cambokeels, Durham.
Site: later 14th to early 16th century.
Blade and scale tang broken. Iron rivets. L 153mm.
For site see Hildyard and Charlton 1947; Hildyard 1949.

**G290 KNIFE**

Cambokeels, Durham.
Site: later 14th to early 16th century.
Blade and scale tang broken. L 127mm.
For site see Hildyard and Charlton 1947; Hildyard 1949.

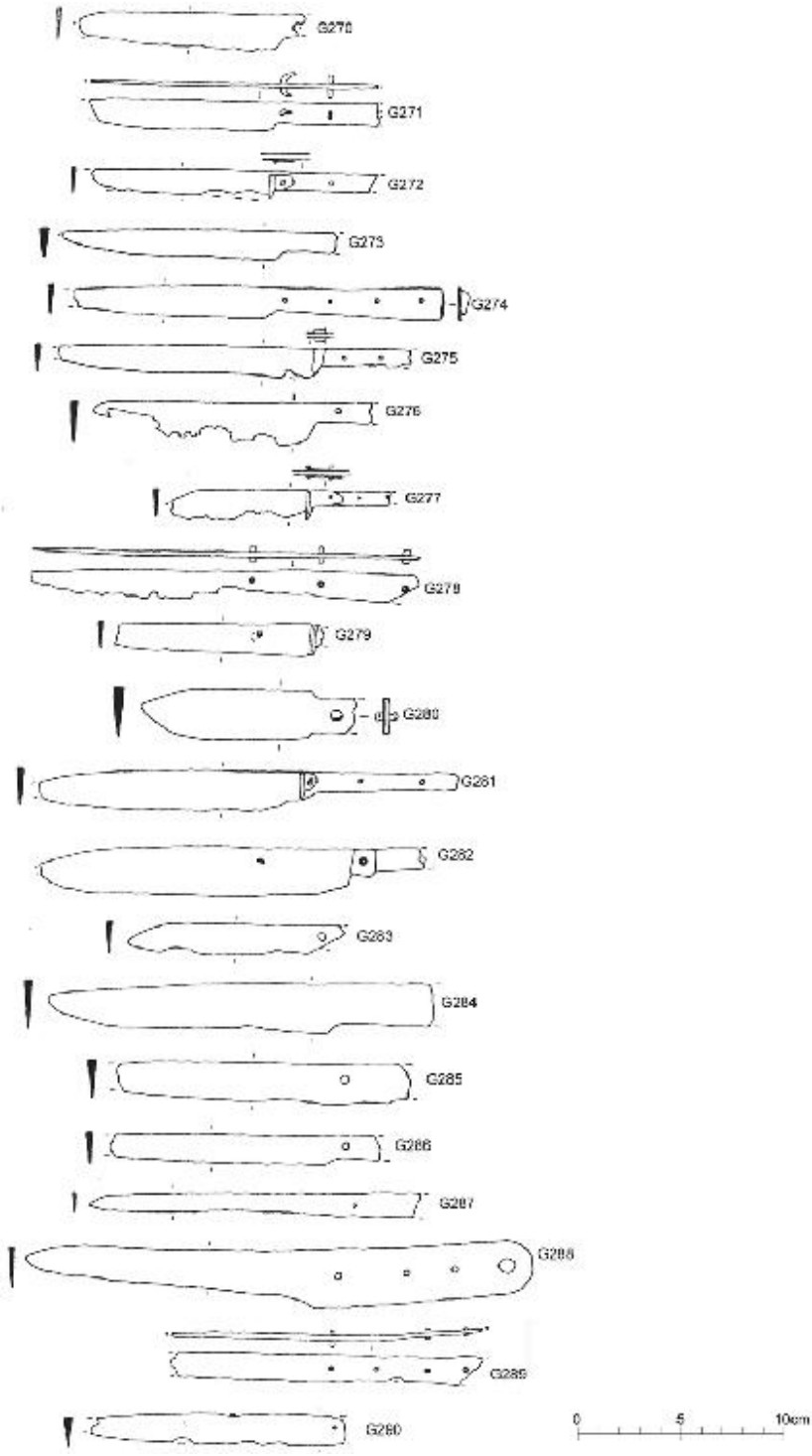



FIGURE 8.19
*Knives*

**G291 KNIFE**
Waltham Abbey, Essex.
First half 16th century.
Blade broken. Shoulder plates. Nib on end of tang for lost cap. L 195mm.
Excavated by P J Huggins. From Romeland.

**G292 KNIFE**
brome, Suffolk.
16th century.
Scale tang broken. Copper-alloy rivet.
L 123mm.
West 1970, 110, fig 12.1.

**G293 KNIFE**
Hadleigh Castle, Essex.
16th century.
Blade and scale tang broken. Cutler's mark, not inlaid, on blade. L 107mm.
noodall 1975c, 138, fig 28.336.

**G294 KNIVES**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Blade and scale tang broken.?Leaded copper-alloy shoulder plates, bronze rivets with disc-shaped heads. L 155mm.
Goodall 1979c, 129, fig 19.17.

**G295 KNIFE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Scale tang broken. Brazing fluid from former shoulder plates. L 141mm.
Goodall 1979c, 129, fig 19.15.

**G296 KNIFE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Blade broken. Pewter shoulder plates, copper-alloy rivets. L 157mm.
Goodall 1979c, 129, fig 19.16.

**G297 KNIFE**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Blade and scale tang broken. Inlaid cutler's marks. L 122mm.

Goodall 1980a, 510, fig 265.29.

**G298 KNIFE**
Winchester, Hampshire.
13th–14th century.
Blade and scale tang broken. Metallurgy: wrought iron blade. L 113mm.
Goodall 1990-16, fig 257.2817.

**G299 KNIFE**
London.
Late 13th to mid 14th century.
Complete but distorted. Copper-alloy rivets L 152mm.
Henig 1974, 189, fig 37.44.

**G300 KNIFE**
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.
Complete. Inlaid cutler's mark. Tubular copper-alloy rivets. l 188mm.
Goodall 1977a, 257, fig 43.15.

**G301 KNIFE**
Old Sarum, Wiltshire.
13th or 14th century.
Blade and scale tang broken. L 175mm.
Musty and Rahtz 1964, 143, fig 5.3.

**G302 KNIFE**
Seacourt, Oxfordshire.
Site: mid to late 12th century to late 14th century.
Scale tang broken. L 181mm.
Biddle 1961–62, 174, fig 29.5, scale 1:4, not 1:3.

**G303 KNIFE**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Blade and scale tang broken. Iron rivet.
L 139mm.
Salisbury and South Wiltshire Museum, Salisbury, O.S.E1.

**G304 KNIFE**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.

Blade broken, scale tang damaged. Iron rivets, fragment of mottled grey bone handle, and cutler's mark, not inlaid, on blade.
L 140mm.
Salisbury and South Wiltshire Museum, Salisbury, O.S.C142, 30/1920–21.

**G305 KNIFE**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Scale tang broken. L 182mm.
Salisbury and South Wiltshire Museum, Salisbury, O.S.C141, 30/1920–21.

**G306 KNIFE**
Northampton.
14th century.
Blade and scale tang broken. L 96mm.
Central Museum, Northampton. From between Bearwood Street and Silver Street.

**G307 KNIFE**
Seacourt, Oxfordshire.
14th century.
Blade and scale tang broken. L 166mm.
Biddle 1961–62, 175, fig 29.6, scale 1:4, not 1:3.

**G308 KNIFE**
Oxford.
Late 14th to mid 15th century.
Blade and scale tang broken. Non-ferrous shoulder plates. Non-ferrous metal along part of top and bottom edges of tang, which has no rivet holes. L 108mm.
Goodall 1976c, 298, fig 26.4.

**G309 KNIFE**
Northampton.
15th century, from *c*1410–20.
Broken blade with brazing fluid from former shoulder plates.Bone handle with copper-alloy cap, collar and tubular rivets.
L 145mm.
Goodall *et al* 1979, 268, fig 118.44.

**G310 KNIFE**
Goltho, Lincolnshire.

Croft A: late Saxon to late 14th or early 15th century. Scale tang broken. Metallurgy: piled blade. L 155mm. Goodall 1975a, 79–82, fig 37.37.

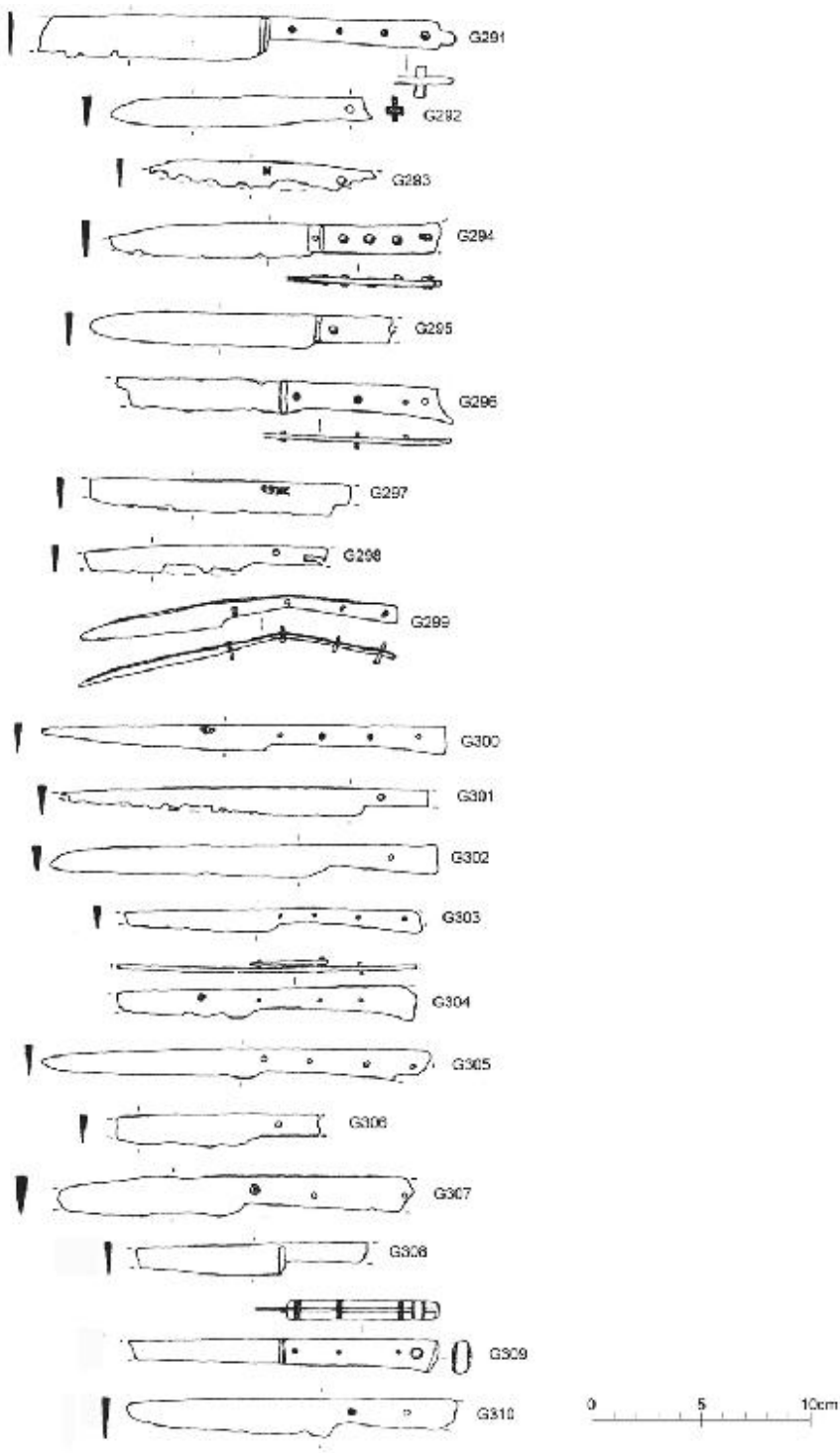



FIGURE 8.20
*Knives*

**G311 KNIFE**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Blade and scale tang broken. Iron rivets.
L 226mm.
Shortt 1972, 118, fig 3.13.

**G312 KNIFE**
Somerby, Lincolnshire.
15th to mid 16th century.
Broken scale tang. Copper-alloy shoulder plates, one distorted, held by iron rivet.
L 130mm.
Mynard 1969, 82, fig 12.IW55.

**G313 KNIFE**
Somerby, Lincolnshire.
15th to mid 16th century.
Blade and scale tang broken. L 145mm.
Mynard 1969, 82, fig 12.IW54.

**G314 KNIFE**
Somerby, Lincolnshire.
15th to mid 16th century.
Blade broken. L 190mm.
Mynard 1969, 83, fig 12.IW61.

**G315 KNIFE**
Northampton.
Early 16th century.
Complete. Non-ferrous shoulder plates,
wooden handle, iron rivets. L 280mm.
Goodall *et al* 1979, 268, fig 118.49.

**G316 KNIFE**
Waltham Abbey, Essex.
*c*1540.
Blade and scale tang broken. Rivet holes obscured. L 145mm.
Huggins 1972, 124, From F63.

**G317 KNIFE**
St Catharine's Hill, Winchester, Hampshire

Site: early 12th century to 1538–40.
Blade and scale tang incomplete. L 93mm.
Hawkes *et al* 1930, 246, fig 29.I21.

**G318 KNIFE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Blade and scale tang broken. Iron rivet, brazing fluid from former shoulder plates.
L 139mm.
Goodall 1979c, 129, fig 19.

**G319 KNIFE**
Rhuddlan, Clwyd.
1241/61.
Blade and scale tang broken. L 114mm.
Goodall 1994, fig 17.2, no. 31.

**G320 KNIFE**
Brome, Suffolk.
Later 13th to mid 14th century.
Blade and scale tang broken. l 154mm.
West 1970, 110, fig 12.3.

**G321 KNIFE**
Northolt Manor, Greater London.
14th century.
Broken blade with inlaid cutler's mark. Scale tang with copper-alloy shoulder plates, rivets, pins and cap. One of four rivets holds shoulder plates, and wooden handle is decorated by eleven pins in line down each side (not all surviving). Cap fitted over nib on tang end. L 156mm.
Excavated by J G Hurst.

**G322 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Scale tang incomplete. L 109mm.
Goodall 1975a, 79–81, fig 37.38.

**G323 KNIFE**
Broadfield, Hertfordshire.
*c*1220–*c*1450.

Blade and scale tang broken. Cutler's mark, not inlaid, on blade.
brazing fluid from former shoulder plates. Iron rivets with fragment of bone scale with ring-and-dot decoration. L 140mm.
Goodall 1974b, 56, fig 22.4.

**G324 KNIFE**
Northampton.
15th century, from *c*1410 –20.
Blade and scale tang broken. Iron rivet.
L 204mm.
Goodall *et al* 1979, 268, fig 118.45.

**G325 KNIFE**
Northampton.
Later 15th century.
Blade broken. Non-ferrous shoulder plates, iron rivets. L 181mm.
Goodall *et al* 1979, 268, fig 118.46.

**G326 KNIFE**
Wallingstones, Hereford and Worcester.
Post-1500 destruction layer with residual objects; site occupied from *c*1200.
Blade and scale tang broken. L 180mm.
Bridgewater 1970–72, 104, no. 90.

**G327 KNIFE**
Somerby, Lincolnshire.
11th to 15th century.
Broken scale tang with iron rivet. n on-ferrous shoulder plate. L 113mm.
Mynard 1969, 82, fig 12.IW51.

**G328 KNIFE**
Hen Caerwys, Clwyd.
Site: *c*1450–1520.
Blade and scale tang broken. Non-ferrous shoulder plates, iron rivets. L 191mm.
Excavated by G b Leach.

**G329 KNIFE**
Somerby, Lincolnshire.
15th to mid 16th century.
Scale tang broken. Brazing fluid from lost shoulder plates. L 172mm.
mynard 1969, 82, fig 12.IW57.

**G330 KNIFE**

Somerby, Lincolnshire.

Over 15th to mid 16th-century house.

Complete. Rivet holes obscured, possible cutler's mark, not inlaid, on blade.

L 214mm.

mynard 1969, 83, fig 12.IW64.

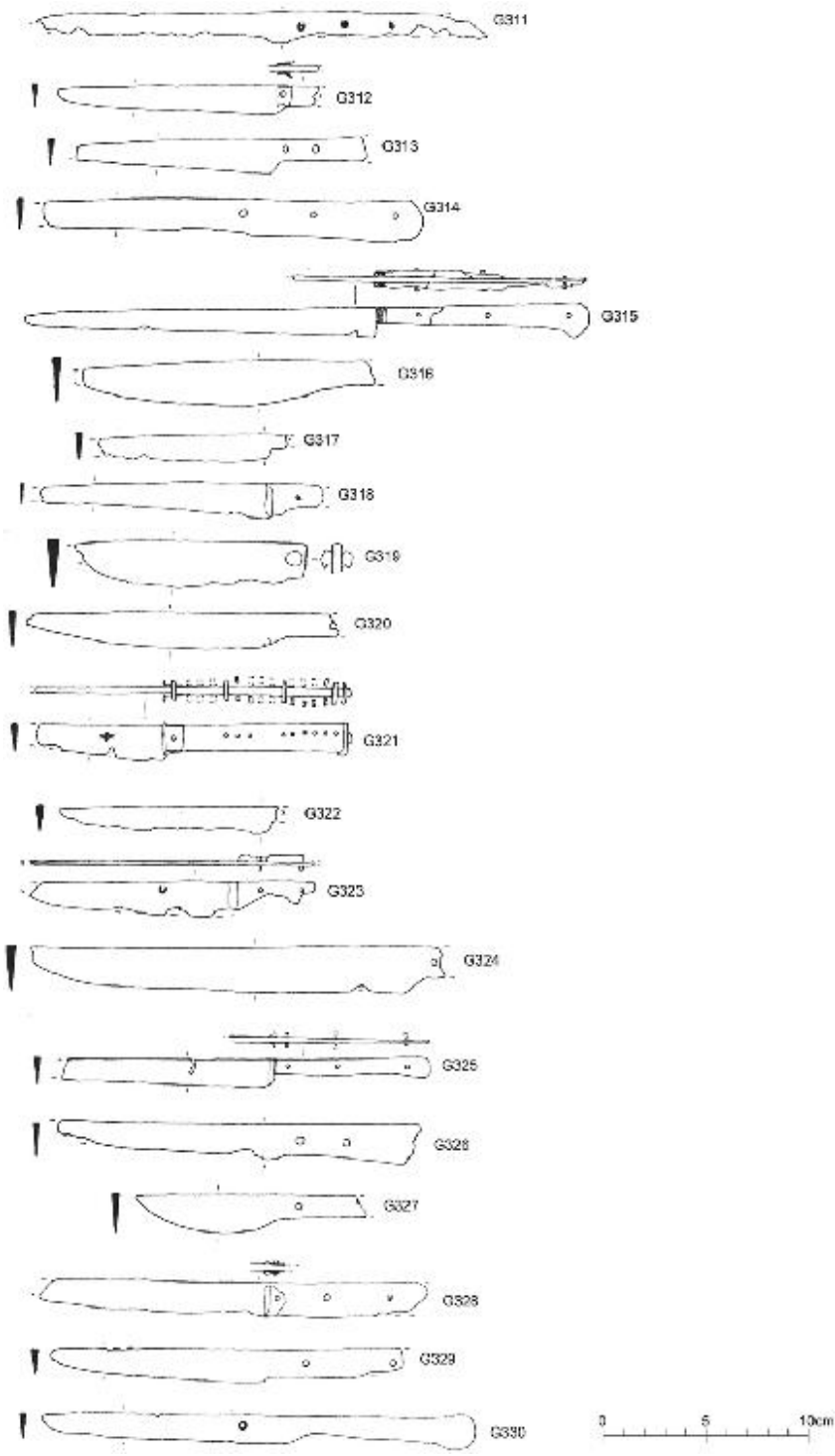



FIGURE 8.21
*Knives*

**G331 KNIFE**
West Hartburn, Durham.
Site: 13th to 16th century.
Blade broken, rivet holes in tang obscured.
Shoulder plates. L 240mm.
Still and Pallister 1967, 146, fig 4.4.

**G332 KNIFE**
North Elmham Park, Norfolk.
*c*1150–*c*1600.
Blade and scale tang broken. Shoulder plates. L 142mm.
Goodall 1980a, 510, fig 265.26.

**G333 KNIFE**
Writtle, Essex.
Early 14th century.
Blade and scale tang broken. Inlaid cutler's mark. L 79mm.
Rahtz 1969b, 87, fig 47.62.

**G334 KNIFE**
Northolt Manor, Greater London.
1370 –1475.
Blade and tang broken. L 212mm.
Hurst 1961, 291, fig 76.20.

**G335 KNIFE**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Scale tang broken. L 187mm.
Shortt 1972, 118, fig 3.14.

**G336 KNIFE**
King's Lynn, Norfolk.
*c*1250–1300.
Blade, tang lost. L 226mm.
Goodall and Carter 1977, 293, fig 133.24.

**G337 KNIFE** (not illustrated)
Seacourt, Oxfordshire.
Mid 13th century.
Blade broken. Metallurgy: pattern-welded blade. L 105mm.
Biddle 1961–62, 175, fig 29.9, pl XIA, scale 1:4, not 1:3.

**G338 KNIFE** (not illustrated)
Winchester, Hampshire.
14th–?15th century.
Blade fragment. Metallurgy: pattern-welded and?steel-edged. L 36mm.
Goodall 1990-16, fig 258.2845.

**G339 KNIFE** (not illustrated)
Winchester, Hampshire.
14th century.
Blade fragment. Metallurgy: pattern-welded blade, steel-edged. L 158mm.
Goodall 1990-16, fig 256.2809.

**G340 KNIFE**
Oxford.
*c*1400–*c*1550 (typologically probably 11th or early 12th century).
Blade fragment with inlaid wire decoration along each side, the wire a silver and gold alloy with silver predominating but with sufficient gold to give a 'gold' colour.
Decoration on side 'a' is a running spiral with sprouting leaves (or branching plant scroll), on site 'b' a chain of linked S-curves alternately or intermittently bisected by a short bar. L 56mm.
Goodall and Hinton 1979, 142, fig 25.5.

**G341 KNIFE**
Stonar, Kent.
*c*1100–*c*1225.
Blade and whittle tang broken. Inlaid non-ferrous wire decoration along blade side(s).
L 102mm.
Excavated by N Macpherson-Grant.

**G342 KNIFE**
Winchester, Hampshire.
11th–?12th century.
Blade and whittle tang broken. Back and both sided of blade inlaid with decorative non-ferrous wire. L 43mm.
Goodall 1990-16, fig 258.2851.

**G343 KNIFE**
Lullington, East Sussex.
*c*1350.
Blade and whittle tang incomplete. Two cutler's marks inlaid with copper

alloy on blade; part of copper-alloy strip inlaid in single groove near back of blade. L 119mm.
Barr-Hamilton 1970, 20, fig 4.46.

**G344 KNIFE**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Blade and whittle tang broken. Two parallel grooves without inlay along one side.
L 126mm.
Birmingham City Museum. For site see Oswald 1962.

**G345 KNIFE**
Newbury, Berkshire.
Mid 15th century.
Blade with swage and groove along one side. L 107mm.
Goodall 1997, fig 19, no. 13.

**G346 KNIFE**
London.
?Late 13th to mid 14th century.
Blade fragment with swage. L 57mm.
Henig 1974, 189, no. 47.

**G347 KNIFE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Blade and tang incomplete. Swage to each side of blade. Inlaid cutler's mark.
L 125mm.
Goodall 1988, fig 74.14; Borenius and Charlton 1936.

**G348 KNIFE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Blade and whittle tang incomplete. Swage to part of blade back. L 160mm.
Goodall 1988, fig 74.13; Borenius and Charlton 1936.

**G349 KNIFE**
Winchester, Hampshire.
Early 13th century.
Blade and whittle tang broken. Oval, copper-alloy hilt plate. L 110mm.

Goodall 1990-16, fig 256.2803.

**G350 KNIFE** (not illustrated)
Goltho Manor, Lincolnshire.
*c*1000–1100.
Blade and whittle tang broken. Multiple series of heater-shaped metal plates at junction between blade and tang. L 68mm.
Goodall 1987, 181.

**G351 KNIFE** (not illustrated)
Goltho Manor, Lincolnshire.
*c*1000–1100.
Blade and whittle tang broken. Multiple series of metal plates at junction of blade and tang. L 135mm.
Goodall 1987, 181.

**G352 KNIFE**
Pleshey Castle, Essex.
Part-destruction find probably derived from 12th to early/mid 16th-century occupation.
Blade and whittle tang broken. Brazing fluid, stippled on drawing, from former shoulder plates. L 128mm.
Goodall 1977c, 175, fig 38.9.

**G353 KNIFE**
Stonar, Kent.
*c*1275–1385.
Blade incomplete. Domed end cap end if tang, inlaid cutler's mark on blade.
L 169mm.
Excavated by N Macpherson-Grant.

**G354 KNIFE**
Winchester, Hampshire.
15th century.
Whittle tang fragment with circular end cap.
L 26mm.
Goodall 1990-16, fig 256.2810.

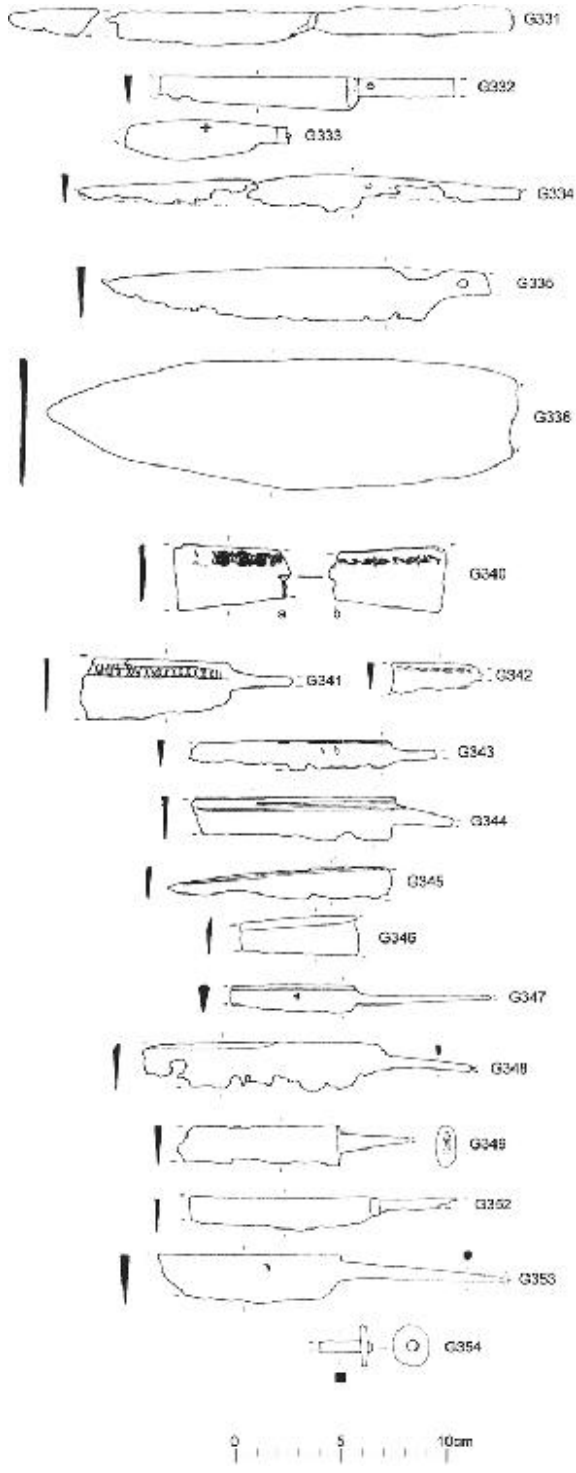



FIGURE 8.22
*Knives*

**G355 KNIFE** (not illustrated)
London.
Late 13th to mid 14th century.
Blade and whittle tang broken. Collar survives from former handle.
L 181, collar diameter 24mm.
Henig 1974, 189, fig 37.43.

**G356 KNIFE**
Hadleigh Castle, Essex.
13th to 14th century.
Blade and scale tang broken. Inlaid cutler's mark on blade, copper-alloy shoulder plates, hollow rivets and end-plate. Ferrified wood on tang. L 142mm.
Goodall 1975c, 138, fig 28.333.

**G357 KNIFE**
Southampton, Hampshire.
1300–1350.
Blade broken. Bone handle, copper-alloy rivets. L 209mm.
Harvey 1975b, 282, fig 254.2060.

**G358 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade broken. Silver shoulder plate, brazed in position. Nib for end cap on end of scale tang, which retains traces of wooden handle.
metallurgy: piled blade. L 145mm.
Goodall 1975a, 79–82, fig 37.36.

**G359 KNIFE**
Writtle, Essex.
Destruction levels of period *c*1425–1521.
Blade broken. Iron rivets, remains of wooden handle. L 160mm.
Rahtz 1969b, 87, fig 47.63.

**G360 KNIFE**
Cambridge.
Early 16th century.
Scale tang knife, blade incomplete. Bone scales held by three rivets, and decorated with three ring-and-dot motifs. L 86mm.
Addyman and Biddle 1965, 124, fig 20.6.

**G361 KNIFE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Scale tang, incomplete blade. L 140mm.
Goodall 1988, fig 74.17; Borenius and Charlton 1936.

**G362 KNIFE**
Old Sarum, Wiltshire.
13th or 14th century.
Blade broken. Bone scales held by iron rivets. L 136mm.
musty and Rahtz 1964, 143, fig 5.2.

**G363 KNIFE**
The Mount, Princes Risborough, buckinghamshire.
14th to early 15th century.
Blade broken. Bone handle, iron rivets, copper-alloy shoulder plates. L 128mm.
Pavry and Knocker 1953–60, 161, fig 12.6.

**G364 KNIFE**
Writtle, Essex.
*c*1306 –1425.
Blade broken. L 168mm.
Rahtz 1969b, 87, fig 48.69.

**G365 KNIFE**
Writtle, Essex.
*c*1306–*c*1425.
Scale tang fragment with tubular copper-alloy rivets and cap. L 89mm.
Rahtz 1969b, 87, fig 48.74.

**G366 KNIFE**
Pivington, Kent.
Early or mid 14th century to early 16th century.
Blade incomplete, scale tang complete.
Bone handle held together by three rivets, and decorated with groups of four copper-alloy pins. L 99mm.
Rigold 1962, 46, fig 8.iv.

**G367 KNIFE**
Northampton.
Later 15th century.

Broken blade with inlaid cutler's mark and non-ferrous shoulder plate. Riveted bone handle. L 178mm.
Goodall *et al* 1979, 268, fig 118.47.

**G368 KNIFE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Blade broken. Brazing fluid from former shoulder plates. Non-ferrous metal shows on X-radiograph along edges of tang. L 99mm.
Goodall 1979c.

**G369 KNIFE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Broken scale tang. L 85mm.
Goodall 1979c,

**G370 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Broken scale tang with probable brass rivets and end plate. L 83mm.
Goodall 1975a, 79–81, fig 37.40.

**G371 KNIFE**
Winchester, Hampshire.
16th century.
Broken blade with decorated copper-alloy shoulder plates. Incomplete bone handle with copper-alloy rivets. L 91mm.
Goodall 1990-16, fig 257.2831.

**G372 KNIFE**
Writtle, Essex.
*c*1425–1521.
Scale tang with non-ferrous rivets and cap.
L 98mm.
Rahtz 1969b, 87, fig 47.64.

**G373 KNIFE**
Wharram Percy, North Yorkshire.
Early 15th century.
Broken scale tang, rivet holes obscured, with copper-alloy cap. L 54mm.
Goodall 1979a, 119, fig 62.46.

**G374 KNIFE**
Bolton, Fangfoss, Humberside.
End 14th to mid 15th century.
Scale tang tip with copper-alloy end cap and collar. L 21mm.
Goodall 1978b, 143, fig 30.37.

**G375 KNIFE**
Northampton.
*c*1410–1420?
Scale tang fragment with copper-alloy cap.
L 41mm.
Goodall *et al* 1979, 268, fig 118.52.

**G376 KNIFE**
Wharram Percy, North Yorkshire.
Early 15th century.
Broken scale tang with copper-alloy rivets and cap. L 80mm.
Goodall 1979a, 118, fig 62.45.

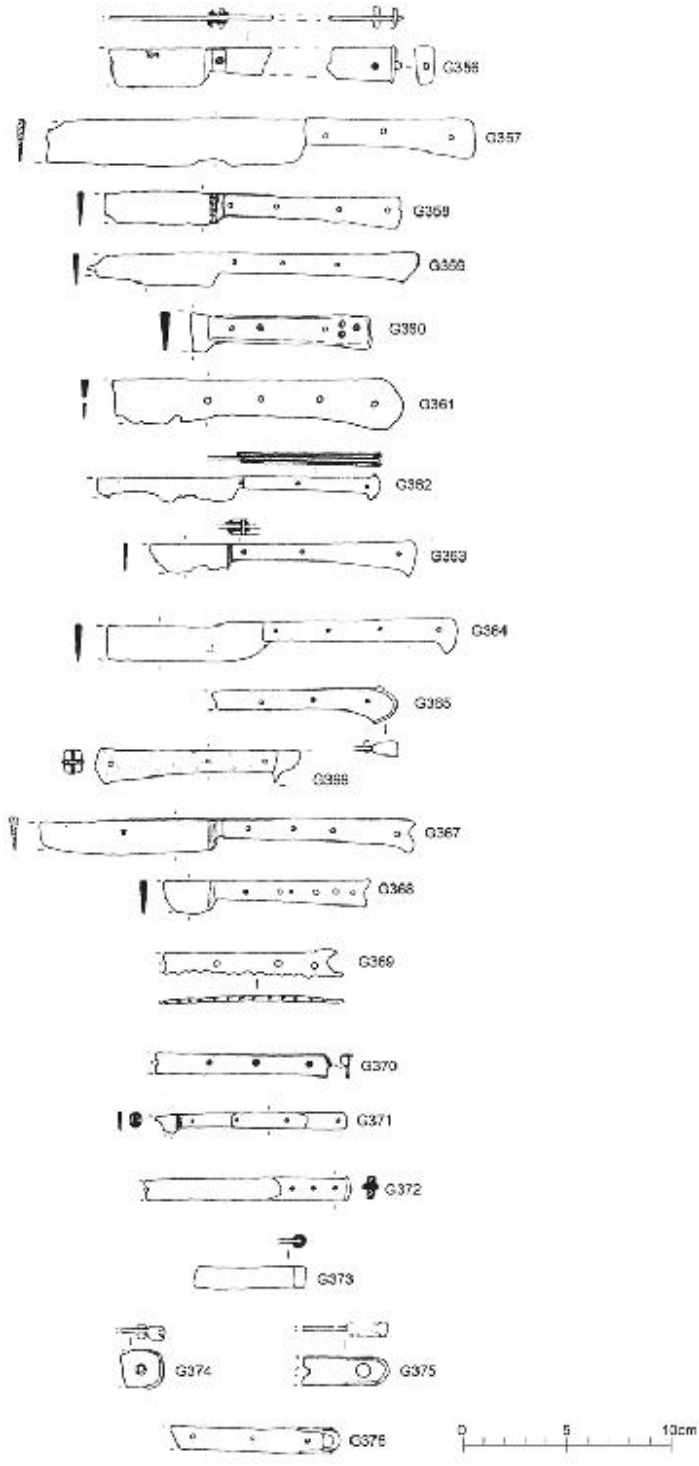



FIGURE 8.23
*Knives*

**G377 KNIFE**
London.
Late 15th–early 16th century.
Blade broken, rivet holes in scale tang obscured. L 166mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**G378 KNIFE**
Woodperry, Oxfordshire.
12th–14th century.
Broken scale tang with copper-alloy rivets and cap. Traces of wooden handle. L 61mm.
Wilson 1846. Ashmolean museum, Oxford, 1873.61e.

**G379 KNIFE** (not illustrated)
Seacourt, Oxfordshire.
Mid to late 12th to late 14th century.
Scale tang knife handle with copper-alloy end cap and bone scales retaining part of black letter inscription …DE BO TE.
Biddle 1961–62, 172–174, fig 29.4.

**G380 KNIFE**
Winchester, Hampshire.
13th century.
Blade and whittle tang broken. Inlaid cutler's mark. L 58mm.
Goodall 1990-16, fig 256.2805.

**G381 KNIFE**
Southampton, Hampshire.
Late 13th or early 14th century.
Blade and whittle tang broken. Inlaid cutler's marks. L 110mm.
Harvey 1975b, 279, fig 251.2013.

**G382 KNIFE**
Hangleton, West Sussex.
13th–14th century.
Blade fragment with inlaid cutler's mark.
L 80mm.
Holden 1963, 169, fig 36.22.

**G383 KNIFE**
Winchester, Hampshire.
14th century.

Blade and whittle tang broken. Inlaid cutler's mark. L 52mm.
Goodall 1990-16, fig 256.2807.

**G384 KNIFE**
Lyveden, Northamptonshire.
1350–1500.
Blade fragment with inlaid cutler's mark.
L 72mm.
Steane and Bryant 1975, 121, fig 46.38.

**G385 KNIFE**
Grenstein, Norfolk.
Late 14th, 15th century.
Blade and whittle tang broken. Inlaid cutler's mark. L 63mm.
Goodall 1980c, fig 76, no. 7.

**G386 KNIFE**
Broadfield, Hertfordshire.
*c*1220–*c*1450.
Blade and whittle tang broken. Inlaid cutler's mark on blade. L 109mm.
Goodall 1974b, 56, fig 22.1.

**G387 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and whittle tang broken. Cutler's mark inlaid probably with copper. L 57mm.
Goodall 1975a, 79–81, fig 37.26, pl VII .C.

**G388 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and scale tang broken. Shoulder plates and revets of brass. Inlaid cutler's mark.
L 84mm.
Goodall 1975a, 79–81, fig 37.39.

**G389 KNIFE**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade fragment with cutler's mark inlaid probably with copper. L 95mm.
Goodall 1975a, 79–81, fig 37.24, pl VII.B.

**G390 KNIFE**
Goltho, Lincolnshire.
Croft B: late Saxon to late 14th century.
Blade and scale tang broken. Cutler's mark inlaid with copper. Brazing fluid from former shoulder plates and along tang, which retains traces of wooden handle.
metallurgy: piled blade. L 122mm.
Goodall 1975a, 79–82, fig 37.35, pl VII.E.

**G391 KNIFE**
Hull, Humberside.
15th century.
Blade and whittle tang broken. Inlaid cutler's mark. L 54mm.
Goodall 1997b, 65, fig 27.77.

**G392 KNIFE**
Winchester, Hampshire.
Late 15th–early 16th century.
Blade fragment with inlaid cutler's mark.
L 36mm.
Goodall 1990-16, fig 258.2850.

**G393 KNIFE**
Winchester, Hampshire.
Late 14th–?15th century.
Blade fragment with inlaid cutler's mark.
L 80mm.
Goodall 1990-16, fig 258.2846.

**G394 KNIFE**
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade fragment. Cutler's mark, inlaid.
Metallurgy: iron core. L 58mm.
Scott 1976, 46, figs 1.j and 6.70

**G395 KNIFE**
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade fragment with inlaid cutler's mark.
L 87mm.
Scott 1976, 46, fig 1.i.

**G396 KNIFE**
Oakham Castle, Leicestershire.
13th to 14th century.
Broken blade with cutler's mark, not inlaid.
L 180mm.
Gathercole 1958, 33, fig 10.1.

**G397 KNIFE**
Hull, Humberside.
15th century.
Blade and whittle tang broken. Cutler's mark, not inlaid. L 163mm.
Goodall 1997b, 65, fig 27.75.

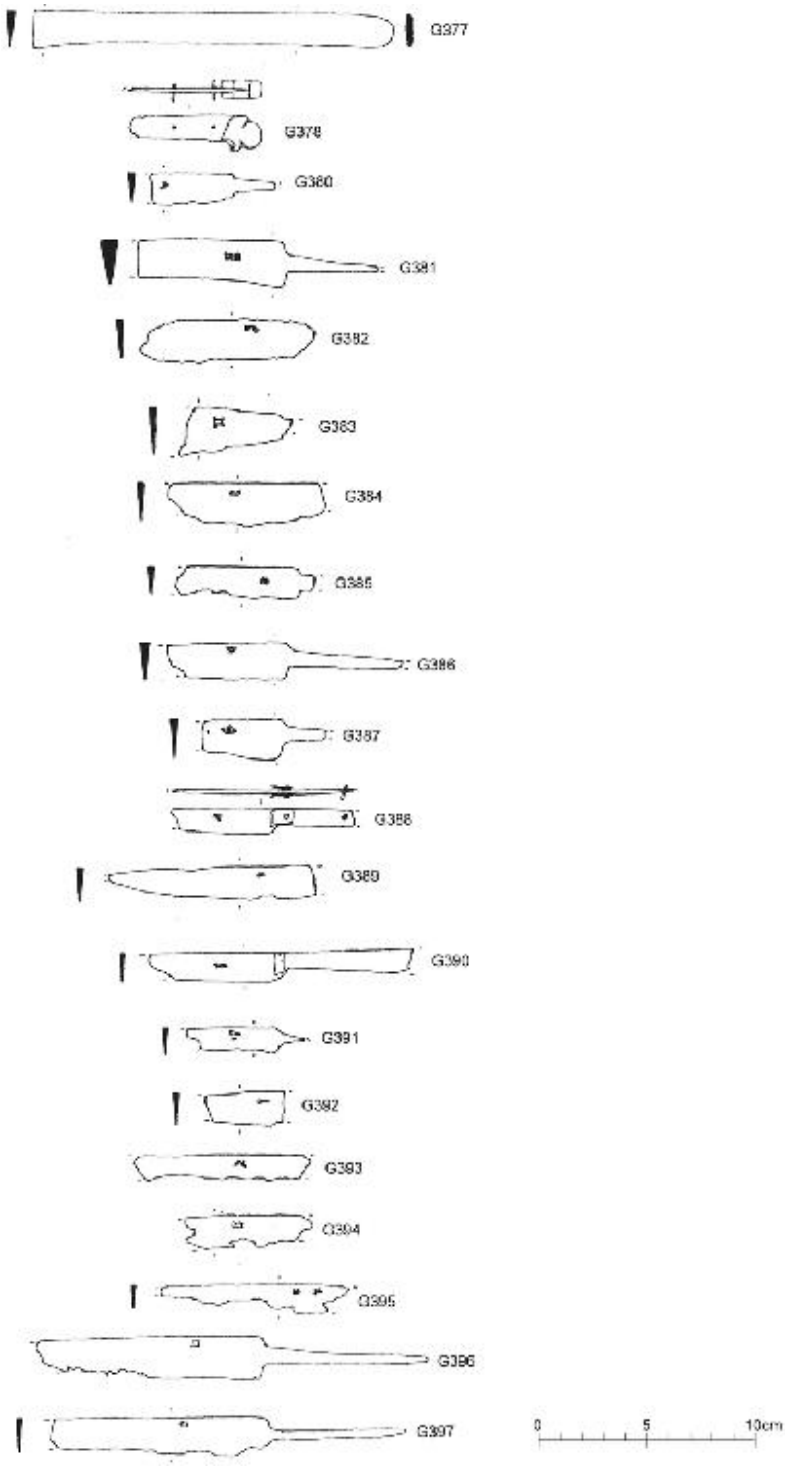



FIGURE 8.24
*Knives*

**G398 KNIFE** (not illustrated)
Winchester, Hampshire.
?Early 11th century.
Blade broken. Metallurgy: steel-cored blade.
L 113mm.
Goodall 1990-16, fig 256.2801.

**G399 KNIFE** (not illustrated)
Winchester, Hampshire.
Second half 13th century.
Blade and whittle tang broken. metallurgy: blade probably steel-edged. L 72mm.
Goodall 1990-16, BS 457.

**G400 KNIFE** (not illustrated)
Chingley, Kent.
Second half 13th century to mid 14th century.
Blade broken. Metallurgy: blade steel-edged. L 93mm.
Goodall 1975d, 60, 90, fig 27.2.

**G401 KNIFE** (not illustrated)
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and whittle tang broken. Metallurgy: steel-edged blade. L 69mm.
Goodall 1975a, 79–82, fig 37.8.

**G402 KNIFE** (not illustrated)
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade and whittle tang broken. Metallurgy: steel-edged blade. L 144mm.
Scott 1976, 45, figs 1.h and 6.c5.

**G403 KNIFE** (not illustrated)
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade broken. Metallurgy: steel-edged blade. L 151mm.
Scott 1976, 45, figs 1.b and 6.13.

**G404 KNIFE** (not illustrated)
Winchester, Hampshire.
Late 14th century.
Blade and whittle tang broken. Metallurgy: piled blade. L 62mm.

Goodall 1990-16, fig 258.2842.

**G405 KNIFE** (not illustrated)
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade and whittle tang broken. Metallurgy: piled blade. L 92mm.
Scott 1976, 46, figs 1.g and 6.E44/67.

**G406 KNIFE** (not illustrated)
Greencastle, Co. Down.
Sire: end 13th to mid 16th century.
Blade broken. Metallurgy: piled blade.
L 123mm.
Scott 1976, 46, figs 1.f and 6.57/42.

**G407 KNIFE** (not illustrated)
Winchester, Hampshire.
Mid 16th century.
Blade and whittle tang broken. Metallurgy: iron-cored blade. L 99mm.
Goodall 1990-16, fig 256.2811.

**G408–415 KNIVES** (not illustrated)
Winchester, Hampshire.
Knife blade fragments, examined metallurgically (Goodall and Tylecote 1990).
G408 13th–14th century. Steel-cored blade.
L 79mm. Goodall 1990-16, fig 258.2847.
G409 14th century. Steel-cored blade.
L 69mm. Goodall 1990-16, fig 258.2844.
G410 16th century. Steel-cored blade.
L 80mm. Goodall 1990-16, fig 258.2852.
G411 14th century. Steel-edged and pattern-welded blade. L 126mm. Goodall 1990-16, fig 258.2843.
G412 15th century. Steel-edged blade.
L 108mm. Goodall 1990-16, fig 258.2848.
G413 15th–?16th century. Steel-edged blade.
L 72mm. Goodall 1990-16, fig 258.2849.
G414 Early to mid 13th century. Iron-cored blade. L 71mm. Goodall 1990-16, fig 258.2840.
G415 Mid 13th century. Wrought iron blade. L 86mm. Goodall 1990-16, fig 258.2841.

**G416 KNIFE** (not illustrated)
Greencastle, Co. Down.
Site: end 13th to mid 16th century.
Blade fragment. Metallurgy: steel-edged.
L 75mm.
Scott 1976, 45, figs 1.d and 6.39a.

**G417 KNIFE** (not illustrated)
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Blade and scale tang broken. Probable brass rivet and traces of wooden handle on scale tang. Metallurgy: piled blade. L 142mm.
Goodall 1975a, 79–82, fig 37.34.

**G418 SHEARS**
Ospringe, Kent.
*c*1483 to 1550.
Arm with broken bow. L 82mm.
Goodall 1979c, 129, fig 20.24.

**G419 SHEARS**
Criccieth Castle, Gwynedd.
Site: *c*1220 to 1404.
One blade broken. L 95mm.
O'Neil 1944–45, 42, no. 40.

**G420 SHEARS**
Water Newton, Cambridgeshire.
Site: 12th to 13th century.
Blades and bow broken. L 98mm.
Green 1962–63, 78, fig 4.2.

**G421 SHEARS**
Castle Acre Castle, Norfolk.
1140s deposit with derived material. Site founded soon after 1066.
Blade tips lost. L 123mm.
Goodall 1982, fig 38, no. 30.

**G422 SHEARS**
Kings Langley, Hertfordshire.
15th century.
Arm, bow and blade broken. L 120mm.

Neal 1973, 56, fig XV .75.

**G423 SHEARS**
Ospringe, Kent.
*c*1483 to 1550.
Arm with broken bow. L 143mm.
Goodall 1979c, 129, fig 20.23.

**G424 SHEARS**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
One arm broken. L 151mm.
Goodall 1988, fig 75.25; Borenius and Charlton 1936.

**G425 SHEARS**
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. L 159mm.
Glenn 1915.

**G426 SHEARS**
Waltham Abbey, Essex.
12th to 13th century.
Blade and bow broken. L 168mm.
Excavated by P J Huggins. From Pentecostal Chapel.

**G427 SHEARS**
East Hill Farm, Houghton Regis, Bedfordshire.
*c*1000 to 1400.
Blades damaged. L 176mm.
Luton museum, L/338/38.

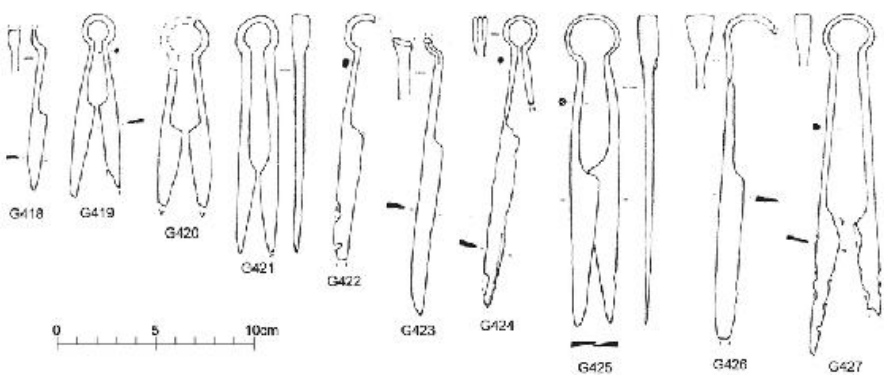


FIGURE 8.25
*Shears*

**G428 SHEARS**
Winchester, Hampshire.
Early 13th century.
Complete. L 183mm.
Goodall 1990-17, fig 260.2875.

**G429 SHEARS**
Goltho Manor, Lincolnshire.
11th century.
Complete. L 188mm.
Goodall 1987, fig 157.69.

**G430 SHEARS**
Castle Acre Castle, Norfolk.
1140s deposit with derived material. Site founded soon after 1066.
Complete. L 198mm.
Goodall 1982, fig 38, no.31.

**G431 SHEARS** (not illustrated)
Weoley Castle, Birmingham, West Midlands.
*c*1200 to 1230.
Bow damaged, silver inlaid decorative stamps on outer face of each blade.
L 200mm.
Oswald 1962, 129, fig 51.4.

**G432 SHEARS**
Sulgrave, Northamptonshire.
Second half 11th century, possibly just post-Conquest.
Bow and blades broken. L 212mm.
Excavated by B K Davison.

**G433 SHEARS**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Blades broken. L 143mm.
Goodall 1980a, 513, fig 266.56.

**G434 SHEARS**
Old Sarum, Wiltshire.
Associated with coin of Williami.

One arm incomplete. L 217mm.
Stone and Charlton 1935, 184, fig 3.2.

**G435 SHEARS**
Faxton, Northamptonshire.
Site: 12th to 15th century.
Blades broken. L 190mm.
Excavated by L A S Butler.

**G436 SHEARS**
Ayton Castle, North Yorkshire.
13th century. Found with sickles, spearhead, axe and pitchfork.
Blades broken. L 220mm.
Rimington and Rutter 1967, 60, fig 11.37/19.

**G437 SHEARS**
Gomeldon, Wiltshire.
Second half 12th century.
Blade tips broken. L 226mm.
Musty and Algar 1986.

**G438 SHEARS**
London.
14th century.
Blades and bow damaged. L 248mm.
Museum of London (Guildhall Museum 13079). From 1–3 Little Britain, with 14th-century leather.

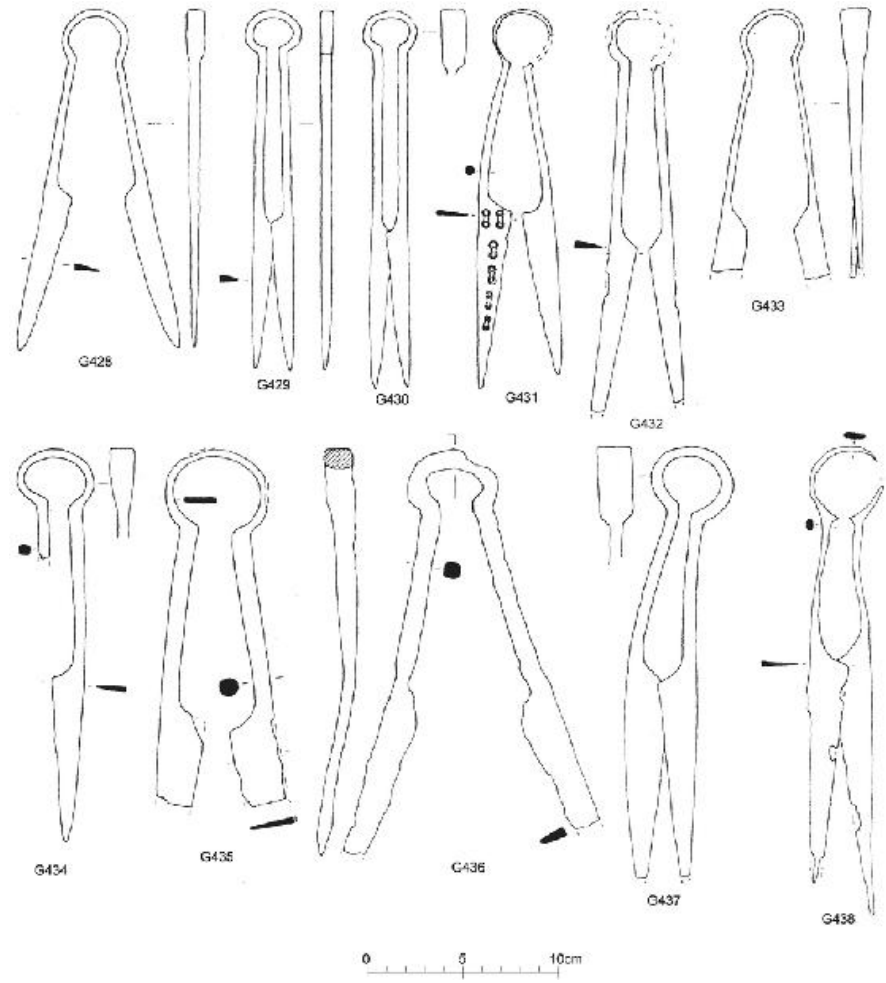



FIGURE 8.26
*Shears*

**G439 SHEARS**
Patchway Field, Stanmer Park, East Sussex.
13th century.
Blade tips lost. L 257mm.
Excavated by W C L Gorton.

**G440 SHEARS**
Northampton.
14th century.
Arm, bow broken. L 258mm.
Goodall *et al* 1979, 268, fig 118.54.

**G441 SHEARS**
Brixworth, Northamptonshire.
Late 13th to 14th century. From floor of stokehole of corn-drying kiln.
Complete, bow distorted. L 314mm.
Excavated by P Woods.

**G442 SHEARS**
Seacourt, Oxfordshire.
Site: mid to late 12th to mid 14th century.
Blades damaged. L 328mm.
Biddle 1961–62, 172, fig 29.1, scale 1:4, not 1:3.

**G443 SHEARS**
Wallingstones, Hereford and Worcester.
1300–25 to before 1400.
Arm, bow and blade broken. L 114mm.
Bridgewater 1970–72, 102, no. 38.

**G444 SHEARS** (not illustrated)
Greencastle, Co. Down.
Site: end 13th century to mid 16th century.
Blade and handle broken. Metallurgy: steel-cored blade. L 47mm.
Scott 1976, 45, figs 1.a and 6.3b.

**G445 SHEARS** (not illustrated)
Woodperry, Oxfordshire.
12to 14th century.
Bow and blade broken. L 67mm.
Ashmolean museum, Oxford, 1873.98. For site see Wilson 1846.

**G446 SHEARS** (not illustrated)
Northampton.
Later 15th century.
Arm, blade and handle broken. L 65mm.
Goodall *et al* 1979, 268, fig 118.55.

**G447 SHEARS** (not illustrated)
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Arm, blade and handle broken. L 83mm.
Goodall 1988, 211.

**G448 SHEARS** (not illustrated)
Pleshey Castle, Essex.
Post-destruction find probably derived from 12th to early–mid 16th century occupation.
Arm, blade and handle broken. L 93mm.
Goodall 1977c, 175, fig 38.12.

**G449 SHEARS** (not illustrated)
Pleshey Castle, Essex.
Post-destruction find probably derived from 12th- to early–mid 16th-century occupation.
Arm, blade and bow broken. L 98mm.
Goodall 1977c, 176, fig 38.11.

**G450 SHEARS** (not illustrated)
Thelsford Priory, Warwickshire.
1400 to 1536.
Arm, blade and handle broken. L 71mm.
Excavated by Mrs M Gray.

**G451 SHEARS** (not illustrated)
Dyserth Castle, Gwynedd.
Site: 1241–63.
Handle broken, cutting edge damaged.
L 76mm.
Glenn 1915.

**G452 SHEARS** (not illustrated)
The Hamel, Oxford.
14th, early 15th century.
Blade and handle broken. L 87mm.
Goodall 1980d.

**G453 SHEARS** (not illustrated)
Winchester, Hampshire.
Second half 13th century.
Blade and handle fragment. L 94mm.
Goodall 1990-17.

**G454 SHEARS** (not illustrated)
Upton, Gloucestershire.
Mid to later 13th century.

Blade and handle fragment. L 82mm.
Rahtz 1969a, 108, fig 12.88.

**G455 SHEARS** (not illustrated)
King's Lynn, Norfolk.
*c*1150 to 1250.
Arm, blade and handle broken. L 129mm.
Goodall and Carter 1977, 295, fig 133.34.

**G456 SHEARS** (not illustrated)
Waltham Abbey, Essex.
Site: *c*1200 to 16th or 17th century. From hearth in forge.
Blade and handle fragment. L 73mm.
Goodall 1973a, 170, fig 11.26.

**G457 SHEARS** (not illustrated)
Gloucester.
13th century.
Arm, blade and handle broken. L 131mm.
Hassall and Rhodes, 1974, 78, fig 30.14.

**G458 SHEARS**
Loughor Castle, West Glamorgan.
Site: *c*1106 to late 13th century.
Arm with broken blade and handle.
L 133mm.
Excavated by J M Lewis.

**G459 SHEARS** (not illustrated)
Winchester, Hampshire.
Late 11th century.
Blade and handle fragment. L 154mm.
Goodall 1990-17, 863, no. 2872.

**G460 SHEARS** (not illustrated)
Pevensey, East Sussex.
Site: *c*1200 to *c*1500.
Arm with broken handle. L 198mm.
Dulley 1967, 228, fig 65.3.

**G461 SHEARS**
Woodperry, Oxfordshire.

12th–14th century.
Arm, bow broken. L 77mm.
Ashmolean museum, Oxford, 1873.98. For site see Wilson 1846.

**G462 SHEARS**
Baginton Castle, Warwickshire.
Castle probably 14th–15th century, desolate in 1535–37
Bow and blade broken. L 107mm.
Herbert Art Gallery and Museum, Coventry.

**G463 SHEARS**
Netherton, Hampshire.
Mainly mid 14th century.
Arm with broken bow. L 136mm.
Goodall 1990-28, fig 9.4, no. 174.

**G464 SHEARS**
Hen Domen, Powys.
13th century.
Arm, bow broken. L 183mm.
Barker and Higham 2000.

**G465 SHEARS**
Chester.
13th century.
One blade incomplete. L 195mm.
Whitwell and McNamee 1964, 18, fig 13.1.

**G466 SHEARS**
South Witham, Lincolnshire.
L ate 13th century to 1308–13.
Complete. L 211mm.
Goodall 2002, fig 7.1, no. 12.

**G467 SHEARS**
Northampton.
13th to 14th century.
Complete. L 225mm.
Goodall *et al* 1979, 268, fig 118.53.

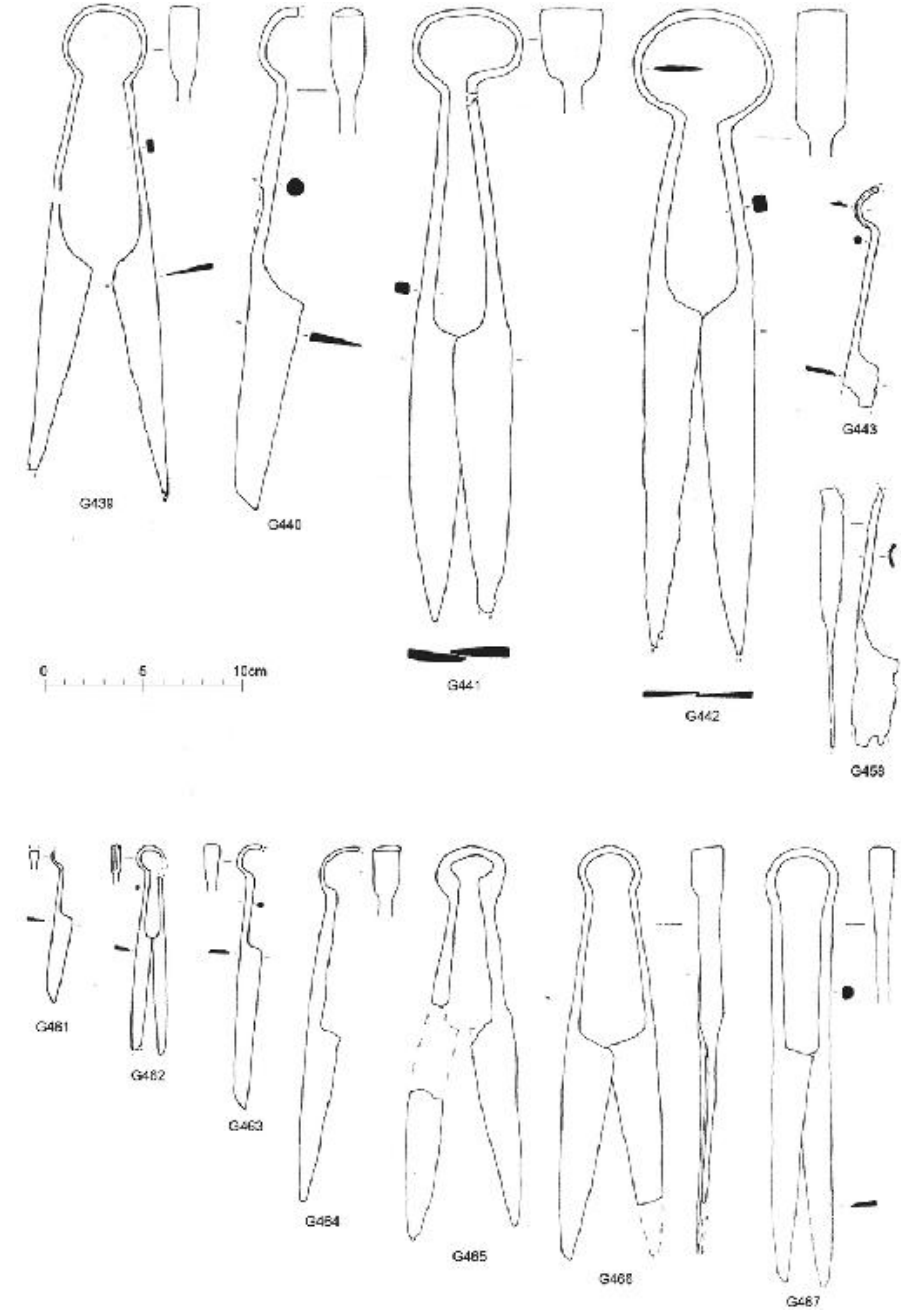



FIGURE 8.27
*Shears*

**G468 SHEARS**
Portchester Castle, Hampshire.
13th century.

Blades broken. L 219mm.
Hinton 1977, 198, fig 106.38.

**G469 SHEARS**
Cambokeels, Durham.
Later 14th to early 16th century.
Bow and one blade broken. L 285mm.
Hildyard 1949, 199, fig 6.4.

**G470 SHEARS**
Stonar, Kent.
Derived from 13th–14th century levels.
Arm with broken bow and blade. L 73mm.
Excavated by N Macpherson-Grant.

**G471 SHEARS**
Oxford.
*c*1325 to *c*1400.
Blade fragment. L 50mm.
Goodall 1977e, 142, fig 26.15.

**G472 SHEARS**
London.
Late 15th to early 16th century.
Shears blade, handle broken. L 110mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**G473 SHEARS**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Arm with broken blade and handle.
L 160mm.
Goodall 1979a, 118, fig 62.50.

**G474 SHEARS**
Waltham Abbey, Essex.
16th/17th-century destruction debris, plus derived material from 13th century onwards.
Fragment of handle and blade with back rib.
L 106mm.
Goodall 1973a, 170, fig 11.27.

**G475 SHEARS**
West Whelpington, Northumberland.
Medieval, pre-1500.
Blade broken across base of handle.
L 194mm.
Jarrett and Stevens 1962, 221, fig 11.23.

**G476 SHEARS**
London.
Late 13th to mid 14th century.
Complete. L 92mm.
Henig 1974, 189, fig 37.53.

**G477 SHEARS**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Blades broken, one handle damaged.
L 91mm.
Salisbury and South Wiltshire Museum, Salisbury, O.S.C28.

**G478 SHEARS**
Stonar, Kent.
*c*1275 to 1385.
Arm with broken bow and blade. L 103mm.
Excavated by N Macpherson-Grant.

**G479 SHEARS**
Kent's Moat, Sheldon, West Midlands.
12th to 13th century.
One blade broken. L 117mm.
Dornier 1967, 55.

**G480 SHEARS**
Oxford Castle.
Late 14th to mid 15th century.
Blades broken. L 106mm.
Goodall 1976c.

**G481 SHEARS**
Benedictine Priory, Coventry, Warwickshire.
Site founded 1043, dissolved 1538.
Complete but for broken blade tip.

L 119mm.
Herbert Art Gallery and museum, Coventry, 49/227/429. For site see Hobley 1971.

**G482 SHEARS**
Winchester, Hampshire.
15th century.
One handle and arm missing. L 125mm.
Goodall 1990-17, fig 260.2877.

**G483 SHEARS**
Dyserth Castle, Gwynedd.
Site: 1241–63.
Complete. L 152mm.
Glenn 1915.

**G484 SHEARS**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.
Arm, bow and blade broken. L 141mm.
Excavated by Mrs M Gray.

**G485 SHEARS**
Winchester, Hampshire.
11th century.
Complete but for fracture in one handle.
L 175mm.
Goodall 1990-17, fig 260.2873.

**G486 SHEARS**
Stonar, Kent.
*c*1275 to 1385.
One blade missing. L 200mm.
Excavated by N Macpherson-Grant.

**G487 SHEARS**
Wroughton Copse, Fyfield Down, Wiltshire.
13th century (mid?) to early 14th century.
Complete. L 203mm.
Excavated by P J Fowler.

**G488 SHEARS**

Castle Acre Castle, Norfolk.
1140s/1150s deposit with derived material.
Site founded soon after 1066.
Blades broken, bow distorted. L 218mm.
Goodall 1982.

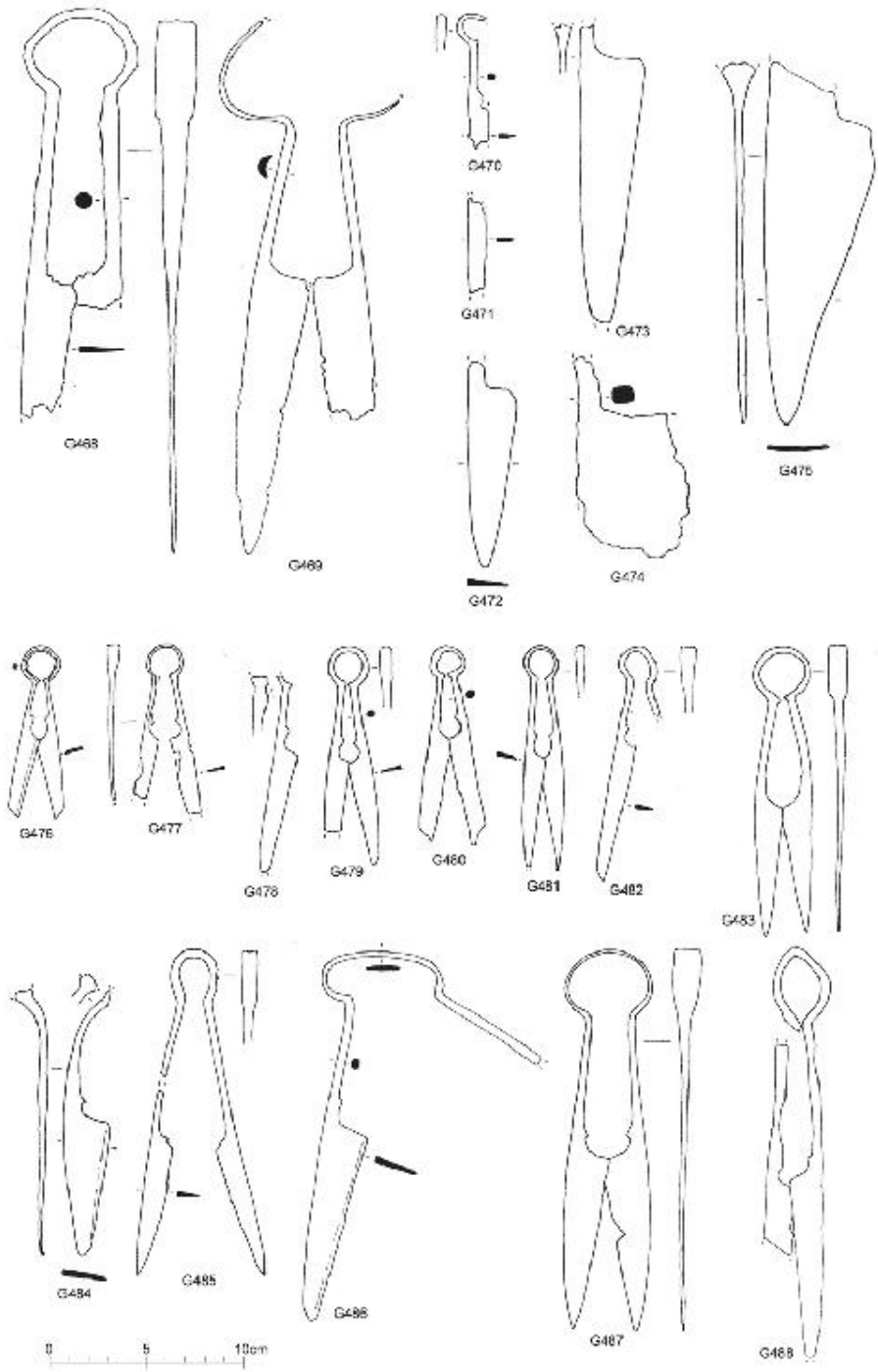



FIGURE 8.28
*Shears*

## G489 SHEARS

Dover Castle, Kent.
Late 12th century to late medieval.
One blade lost. L 158mm.
Rigold 1967, 109, fig 9.Fe7.

**G490 SHEARS**
Seacourt, Oxfordshire.
Mid to late 14th century.
Arm, blade and handle broken. L 111mm.
Biddle 1961–62, 175, fig 29.8, scale 1:4, not 1:3.

**G491 SHEARS**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Arm, blade and handle broken, inlaid mark on blade. L 90mm.
Goodall 1975a, 82, fig 37.44.

**G492 SHEARS**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Arm, blade and handle broken. L 95mm.
Goodall 1975a, 82, fig 37.43.

**G493 SHEARS**
Benedictine Priory, Coventry, Warwickshire.
Site: founded 1043, dissolved 1538.
Complete. L 94mm.
Herbert Art Gallery and Museum, Coventry, 49/227/430. For site see Hobley 1971.

**G494 SHEARS**
Stonar, Kent.
*c*1275 to 1385.
Bow and one blade broken. L 100mm.
Excavated by N Macpherson-Grant.

**G495 SHEARS**
Seacourt, Oxfordshire.
Site: mid to late 12th to mid 14th century.
Complete. L 138mm.
Biddle 1961–62, 172, fig 29.2, scale 1:4, not 1:3.

**G496 SHEARS**
Goltho, Lincolnshire.
Probably late 14th to early 15th century.
Complete. L 138mm.
Goodall 1975a, 82, fig 37.45.

**G497 SHEARS**
Wintringham, Cambridgeshire.
Around early 14th century.
Handle broken. L 136mm.
Goodall 1977a.

**G498 SHEARS**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Blade and bow broken. L 144mm.
Goodall 1988, fig 75.27. Borenius and Charlton 1936.

**G499 SHEARS**
Seacourt, Oxfordshire.
Site: mid to late 12th to mid 14th century.
Complete. L 149mm.
Biddle 1961–62, 172, fig 29.3, scale 1:4, not 1:3.

**G500 SHEARS**
Goltho, Lincolnshire.
Early 14th century.
Complete. L 144mm.
Goodall 1975a, 82, fig 37.46.

**G501 SHEARS**
Baginton, Warwickshire.
15th century.
Complete. L 147mm.
Wilkins 1975, 126, fig 8.14.

**G502 SHEARS**
Waltham Abbey, Essex.
16th century.
Arm with broken blade and handle. L 86mm.
Excavated by P J Huggins. From Romeland.

**G503 SHEARS** (not illustrated)
Great Yarmouth, Norfolk.
12th century.
Looped bow, one blade tip broken. Heavily corroded. L 231mm.
Rogerson 1976, 166, fig 52.18.

**G504 SHEARS** (not illustrated)
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Looped bow, blades largely lost. L 175mm.
Casey 1931, 251, pl XXXV.1.

**G505 SCISSORS**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Centrally set finger loops, one broken. Blades broken. L 81mm.
Goodall 2002, fig 7.1, no. 11.

**G506 SCISSORS**
Stonar, Kent.
*c*1275–1385.
Arm with centrally set finger loop and broken blade. L 151mm.
Excavated by N Macpherson-Grant.

**G507 SCISSORS**
Avebury, Wiltshire.
Early 14th century.
Centrally set finger loop and blade tip of one arm broken. L 175mm.
Keiller 1965, 178, pl XXVIb.

**G508 SCISSORS**
Northolt Manor, Greater London.
1350–70.
Blades and remaining centrally set finger loop broken. L 116mm.
Excavated by J G Hurst.

**G509 SCISSORS**
Woodperry, Oxfordshire.
12th–14th century.
Complete. Centrally set finger loops. L 120mm.
Ashmolean Museum, Oxford, 1823.58 (illustration from sketch in Accessions Register; object missing).

**G510 SCISSORS**
Woodperry, Oxfordshire.
12th–14th century.
Centrally set finger loops and blades broken. L 130mm.
Ashmolean museum, Oxford, 1873.59. For site see Wilson 1846.

**G511 SCISSORS**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Centrally set finger loops. Blade tips broken.
L 141mm.
O'Neil 1944–45, 41, pl IX.14.

**G512 SCISSORS**
Hadleigh Castle, Essex.
Probably late in occupation from 1230 to mid 16th century.
Broken, centrally set finger loops. blade tips lost. L 137mm.
King 1869, 77; Drewett 1975, 96–97.

**G513 SCISSORS**
Beckery Chapel, Glastonbury, Somerset.
Later 13th to?15th century.
Centrally set finger loops, one broken. blade tips broken. L 182mm.
Rahtz and Hirst 1974, 61, fig 22.15.

**G514 SCISSORS**
Winchester, Hampshire.
Late 15th–16th century.
Centrally set finger loops, one broken.
L 169mm.
Goodall 1990-17, fig 260.2878.

**G515 SCISSORS**
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Centrally set finger loops and blades all broken. L 116mm.
Mynard 1969, 84, fig 13.IW89.

**G516 SCISSORS**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080 –1600.
Centrally set finger loops and blades all broken. L 113mm.

Birmingham City museum, WC 328. For site see Oswald 1962.

**G517 SCISSORS**
Gomeldon, Wiltshire.
Topsoil in yard outside late 13th to 14th-century buildings.
Asymmetrically set finger loops. One blade broken. L 101mm.
Excavated by J W G Musty.

**G518 SCISSORS**
Northolt Manor, Greater London.
1300–50.
Arm with asymmetrically set finger loop.
Blade broken. L 117mm.
Musty and Algar 1986.

**G519 SCISSORS**
Wharram Percy, North Yorkshire.
Mid 15th to early 16th century.
Asymmetrically set finger loops, blade tips broken. L 99mm.
Goodall 1979a, 123, fig 64.102.

**G520 SCISSORS**
Cheddar, Somerset.
Early 13th century to *c*1600.
Aysymmetrically set finger loops, one broken.
L 136mm.
Goodall 1979d, 266, fig 90.3.

**G521 SCISSORS**
Upton, Gloucestershire.
Mid to later 13th century.
Blade, tip lost, broken across base of handle.
L 94mm.
Rahtz 1969b, 108, fig 12.89a .

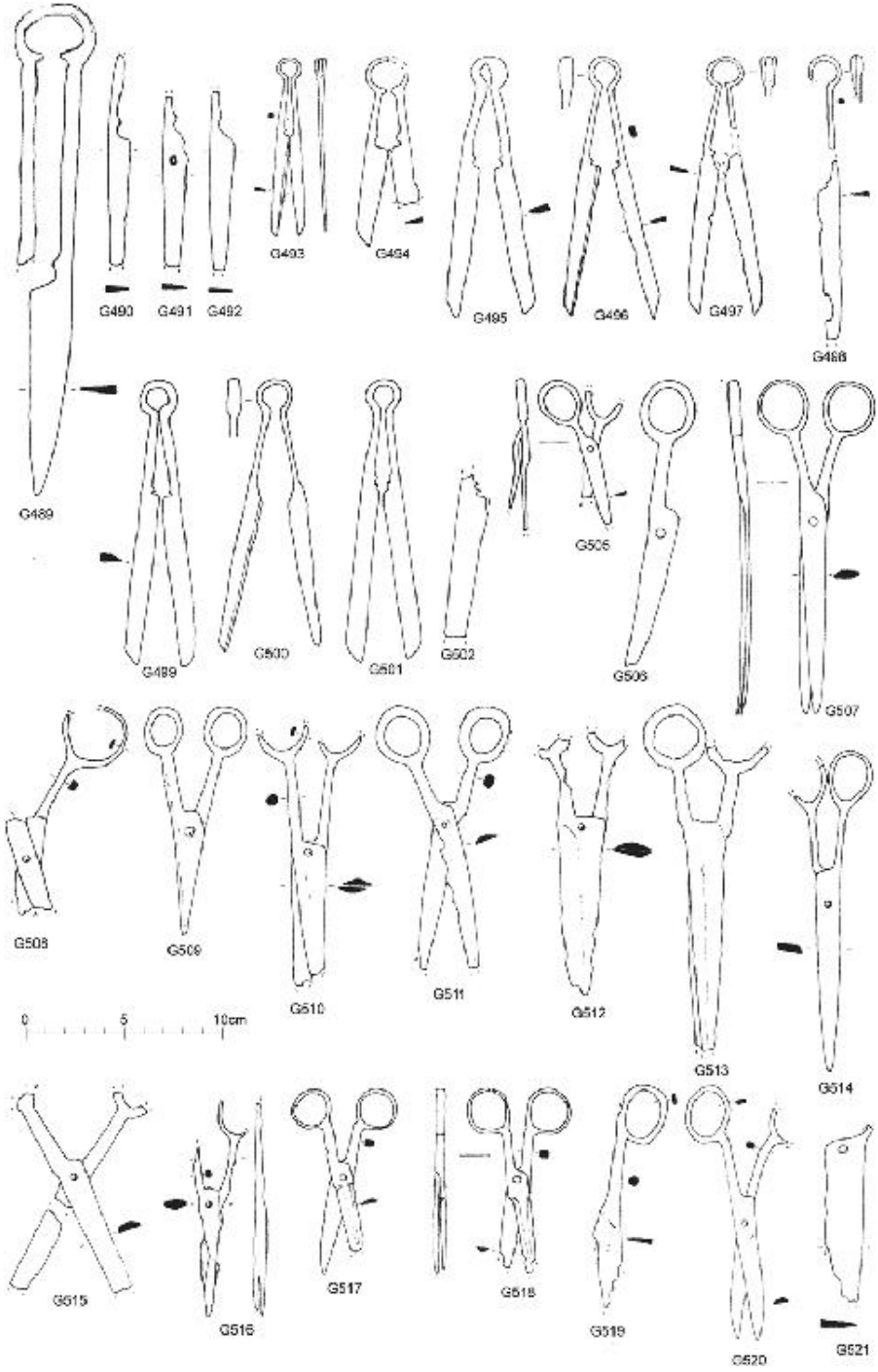



FIGURE 8.29
*Shears and scissors*

# 9
# Building Ironwork and Furniture Fittings

Standing buildings, surviving furniture, documents and excavated finds combine to provide an overall picture of the ironwork associated with the construction and use of medieval buildings. This chapter is divided into two sections, the first of which considers structural ironwork and includes items such as masonry cramps, timber dogs, ties, staples, wallhooks and nails. The second section deals with door, window and furniture fittings, and includes hinge pivots, hinges, casket fittings, hasps, keyhole plates, latch rests, door bolts, handles and window ironwork. Locks and keys, and household fittings, are discussed in succeeding chapters.

## 9.1 Structural Ironwork

### Masonry cramps

Stones were normally bound together with mortar, but cramps such as the 66 'crampettes of iron made for the cramping and joyning of harde stone togethers' mentioned in the Westminster accounts of 1532 (Salzman 1967, 289) were sometimes used to secure them, particularly those which projected or which were set at an angle at which they might slip. Other documentary references indicate the size and position of cramps. For St Stephen's Chapel, Westminster, for example, payment was made in 1334 'for 18 iron called *tyrauntz*, 2 feet in length and 2 inches in breadth each way, for the work of the gable towers' and for '12 crampons ... for fastening stones of various shapes in the high work of the two towers beside the gables', and in 1399 '126 crampons weighing 143 1b' were bought for the great window in the gable of the King's hall at Westminster (Salzman 1967, 289). These references evidently relate to the main structure of buildings, but cramps were also used for fireplaces, as at Corfe in 1292 where there is payment 'for clamps for the fireplace' (Salzman 1967, 290), and for various other fittings.

Cramps were set in grooves cut between stones with their backs fitting

tightly but their arms set in wider holes and secured with lead. Masonry with evidence for iron cramps run in lead includes that from chimneys at Criccieth Castle, Gwynedd (O'Neil 1944–45, 44), and cramp **H4** retains some lead. None of the excavated medieval cramps **H1–9** approaches the two foot length of one of the documented cramps, all being somewhat smaller. In form they are pieces of bar or strip iron with down-turned ends, and all have straight backs with the exception of **H6–9**, distorted by extraction during demolition.

Documents indicate that iron in the form of straps and hoops was also used to bind stonework and strengthen it. A Westminster account of 1531, for example, mentions '2 iron hoops for the top of the western turret of the chapel', and at York in 1364 'iron bars for setting in the mantels of the chymnes' are mentioned (Salzman 1967, 298–290). Perhaps some strap fragments, particularly the larger ones, had such uses and are not from hinges.

## Timber dogs

Timber dogs, long rectangular staples with straight backs and pointed down-turned ends, had various uses in woodworking including securing logs onto the frame over a sawing pit and holding heavy timbers in position when they were used as shores on buildings or in shipyards. Salaman (1975, 172, fig 254) notes that modern dogs vary from about 150 to 450mm in length with ends turned down at right angles or pointing in opposing directions and sharpened, often to a chisel-shaped point. Timber dogs were also used in the structure of a building. Salzman (1967, 291) notes that the term 'dog' is frequently used for a bar or band of iron joining or strengthening woodwork, as with '8 dogges of iron for mending the rafters… of the roof, each dogge weighing 15 lb', 'x grete clampes of yron for the bynddyng of the princyples weyng ciiij$^{xx}$ xvj lb' and 8 'dogges of irne' weighing 164 lb with 'pynnes and revettes serving for the same'. Work at Gloucester Castle in 1442 involved '2 iron dogges' used on the repair of the drawbridge (Salzman 1967, 291), and accounts for the erection of King's Hall, Cambridge, in 1338 include payment for '6 crampes of iron for fastening beams to posts' (Salzman 1967, 207).

None of the timber dogs **H10 –16** approaches the size of some larger ones quoted, but all have straight backs and the two most complete, down-turned ends (**H10** and **H16**). All surviving ends are pointed rather than chisel-shaped.

## Beam stirrups

Beam stirrups were used to bind timbers together or to support them, particularly after alteration. Salzman (1967, 291) quotes payment in 1497 for 'iij stays and a litill sterope and a forth right dogge of iryn for the rodelofte' of St mary-at-Hill, and for 'two iron instruments called stiroppys for binding the wheel of the well' at Clarendon, Wiltshire, in 1482. Post-medieval stirrups such as those from Chingley, Kent (Goodall 1975d, 68–70, fig 34.68) and Louisbourg, Canada, are typically U-shaped with side straps, either twisted or twisted and bent over, nailed to the beam (Dunton 1972, 211–213, figs 103–104). **H17** is incomplete and has no side twist, but it maybe some type of stirrup.

## Hooked bracket

The hooked bracket **H18** may have supported guttering, the projecting stop being used to hammer the pointed shank into timber. Salzman (1967, 266) notes mention of 'iij stiroppes of iron made for the assurance of a gutter of lead' at Westminster in 1532.

## Ties

Ties were alternatives to the timber dog and stirrup which were used for binding timbers together and strengthening the junctions between them. The most common type is the angle tie, a right-angled piece of iron with arms tapering to a point, of which **H19–25** are medieval examples. most are relatively small, but **H24–25** are larger and approach the size of certain timber dogs. **H26–28** are shaped ties, all incomplete, and evidently made for a specific purpose.

## Staples

Staples are variously rectangular, U-shaped and looped, and they were used to bind wood together and to attach fittings to wood and stone. The term staple is perhaps not entirely appropriate for all these uses, but it is a convenient one to apply to all these related objects.

### *Rectangular staples*

Rectangular staples have arms which are either longer or shorter than the overall width of the staple. **H29–50** are all of greater length than width, and are between 20 and 96mm in width, the majority exceeding 50mm. The smaller staples must have had many uses, and some for the middle-sized ones may have acted as bolt keepers on door jambs, as the inner shaping on **H40–41** in particular suggests. A number of the larger staples may have been used as timber dogs, not necessarily driven completely into the wood. Salaman (1975, 172, fig 253) notes that modern timber dogs used for driving into the ends of two boards to keep them together while glueing, are between 50 and 100mm wide.

Rectangular staples of greater width than length have arms which are either straight, have inturned ends, or have clenched inturned ends. **H51–81** have straight arms which are generally broken, although complete ones vary from 16 to 48mm in length, and they are 24 to 106mm wide. The arms are either wedge-shaped or tapering and pointed, both suitable for being driven into timber or joints in masonry. The backs have straight or curved sides, some broadening out in the centre in a manner reminiscent of some roves used on doors and hatches (see below).

**H82–95** have straight arms with inturned ends which were either driven into wood or wrapped around it like binding. Surviving examples range from the slight (**H83**) to the substantial (**H95**), widths varying from 33 to 114mm, lengths from 14 to 59mm.

**H96–106** are rectangular staples with clenched inturned tips which were driven into the wood. They vary in width from 35 to 79mm, although most are over 48mm wide, and nearly all have short arms. **H103** is the only example with arms exceeding 26mm.

## *U-shaped staples*

U-shaped staples are the most numerous of all the different types of staple, and only the most complete examples have been catalogued. U-shaped staples are of two types, the majority (**H107–146**) having straight arms, the remainder (**H147–154**) arms with out-turned tips. These staples were driven into masonry joints or wood, the latter type evidently entirely through the wood since the tips are clenched over, producing a more securely fixed staple. most of the staples are under 40mm in width, and in length between two and three times their width. These staples must have been used to hold the chains and hasps on doors and gates, and to support tethering rings and various types of handle. **H141** still retains the decoratively twisted ring **H656** which, from its form,

must have been a handle.

## *Looped staples*

Looped staples **H155–171** have similarly shaped arms to those of the other staples, those of **H155–159** being straight, of **H160–163** out-turned, and of **H164–165** outturned and clenched. **H166–171** are incomplete.

Looped staples are ideally shaped for holding chains or handles in position, their arms being driven into, or more often through, wood. **H165** retains one link from a chain, and the two incomplete staples **H166** and **H170**, which retain ring handles, recall those on a 14th-century chest which hold substantial mule slings in position (Jenning 1974, 4–5, pl VI). Several of the staples have broad loops, and it is possible that they held handles on doors or chests in the manner of some on an early 16th-century travelling chest (Jenning 1974, 5, pl VII), or held sliding bolts on doors or on items of furniture such as armoires (Eames 1977, 29–30, pls 14–15).

## Wall-hooks

Wall-hooks with tapering shanks are all-purpose hooks which were driven into wood or masonry joints. There are two main types with the hook rising either directly from the end of the shank or before its end.

**H172–193** have hooks rising from the end of the shank, and they are found throughout the medieval period. Their size range is considerable, and the hooks are either straight-backed or curved. Wall-hooks **H194– 221**, with hooks rising before the end of the shank, are a late medieval type which is found principally in 13th-century and later contexts. Their sizes vary, and the hooks are not commonly recurved. A few are straight backed or merely a single curve.

## Hooks

Hooks of various types, of which wall-hooks are the most common, were used in and around medieval buildings. **H222–224** are one of the less common types of hook with shanks which have terminal expansions with shallow depressions. The form of the shank was probably intended to bed firmly in the mortar of a masonry joint. **H222–224** have upright hooks in contrast to the U-

shaped hooks of **H225–227**, two of which have looped shanks and the other an angled, pointed one.

## Eyed spike and ring

The eyed spike **H228** with a closed eye holding a ring and a long shank driven into a wall is yet another fitting used to attach chains, etc, to walls. Unlike the open hooks of wall-hooks and other hooks, the closed eye would permanently secure any chain forged through it.

## Looped straps

**H229–230** are straps which were set into walls with the loop projecting beyond the face. **H229** with its lead caulking was evidently set in masonry, whilst **H230** with its clenched tip is from a site with timber-framed buildings. The loop was intended to support fittings or have them inserted into it.

## Wall anchors

Wall anchors with tapering shanks and flattened heads were used to attach wood to masonry and brickwork, the shank being driven into a mortar joint and the head resting against the wood, holding it in place. Specific uses for wall anchors include holding door and window frames in walls, and securing the framing to which panelling was attached.

**H231** is the only wall anchor with its head in line with the shank, and the head itself broken. **H232–235** have heads at right angles to the shank, that of **H234** perforated for a nail to attach it to the wood and prevent the shank loosening in the wall. The two surviving heads are of flattened oval shape, and **H232** retains horizontal wood graining across its inner face.

## Holdfast

**H236** resembles a wall anchor but has a flattened terminal on its shank, indicating that it was driven through wood and then spread. It was probably used to hold two pieces of wood together.

## S-hooks

**H237–241** are small S-shaped hooks which may have been used to secure slipped tiles on roofs.

## Nails

Nails are ubiquitous finds on most excavations, as might be expected since documentary references frequently price them in thousands. Purchases made at Wye Fair for the needs to Canterbury Cathedral in 1273, for example, totalled 40,000 nails, and accounts for the erection of part of the college of King's Hall, Cambridge, in 1378 include 18,000 nails (Salzman 1967, 304, 206–207).

Salzman (1967, 303–317) discusses the many types and sizes of nail mentioned in medieval documents, and Figure 9.1 shows the types of timber nail isolated from large assemblages at Waltham Abbey, e ssex (Goodall 1973a, 175, fig 13.1–9, Table 3), Ospringe, Kent (mold 1979, 149–150, fig 30.1–9, Table 2) and Stonar, Kent (excavated by N macpherson-Grant):

— Type 1: flat head of square, rectangular or rounded shape.
— Type 2: raised head of circular or rounded rectangular shape.
— Type 3: flat head of narrow, rectangular shape.
— Type 4: faceted rectangular head.
— Type 5: flat head of figure-eight shape.
— Type 6: flat rectangular head formed by flaring, wedge-shaped shank.
— Type 7: flat L -shaped head.
— Type 8: headless nail.
— Type 9: stud with long, flat rectangular head.
— Type 10: stud with rectangular or occasionally rounded flat or faceted head.
— Type 11: stud with rectangular pyramidal head.
— Type 12: stud with circular head.

## Clench bolts and roves

Clench bolts, which are nails or studs whose shank tips are clenched over shaped plates known as roves, were used in ship-building and for other double thickness timber construction including doors and covers. The rove prevented

the nail tip pulling through the wood and made a secure join.

**H242–244** are examples of complete medieval clench bolts assembled from variously shaped component parts. **H244** is from the cover **H404** which originally closed the top of the well at l ydford Castle, Devon, and one of many church doors of identical ledge and batten construction is that at Stillingfleet, North Yorkshire (Addyman and Goodall 1979, 84, 90, figs 9, 22). **H245–250** are a series of differently shaped roves, the latter three like that of **H244** being shaped to the profile of the ledge they clasped. **H251–253** indicate the method of forging rectangular and lozenge-shaped roves from strips of iron by punching nail-holes and then cutting off individual roves with a chisel.

## 9.2 Door, Window and Furniture Fittings

### Hinge pivots

Doors, gates, shutters and windows were hung on iron hinge pivots set either in wood or stone. The range in size and form of surviving hinge pivots reflects these varied circumstances.

#### *Type 1. Vertical hinge pivots*

Harr-hung doors which pivoted on the top and bottom ends of their hanging stiles survived in use in recent times on barns and other farm buildings (Innocent 1916, 239–245). The upper end of the stile projected above the top of the door and was worked into a point which turned in a hole in the underside of the lintel. An iron pin set into the base of some hanging stiles turned in a hole in the threshold, and the timber was sometimes strengthened by an iron strap. Salzman (1967, 295) interprets a hoop and gudgeon mentioned in the 1532 accounts of King's Hall, Cambridge, as binding for the spindle or pivot and the socket in which it turned, but notes no other certain entry in medieval building records for this method of hanging.

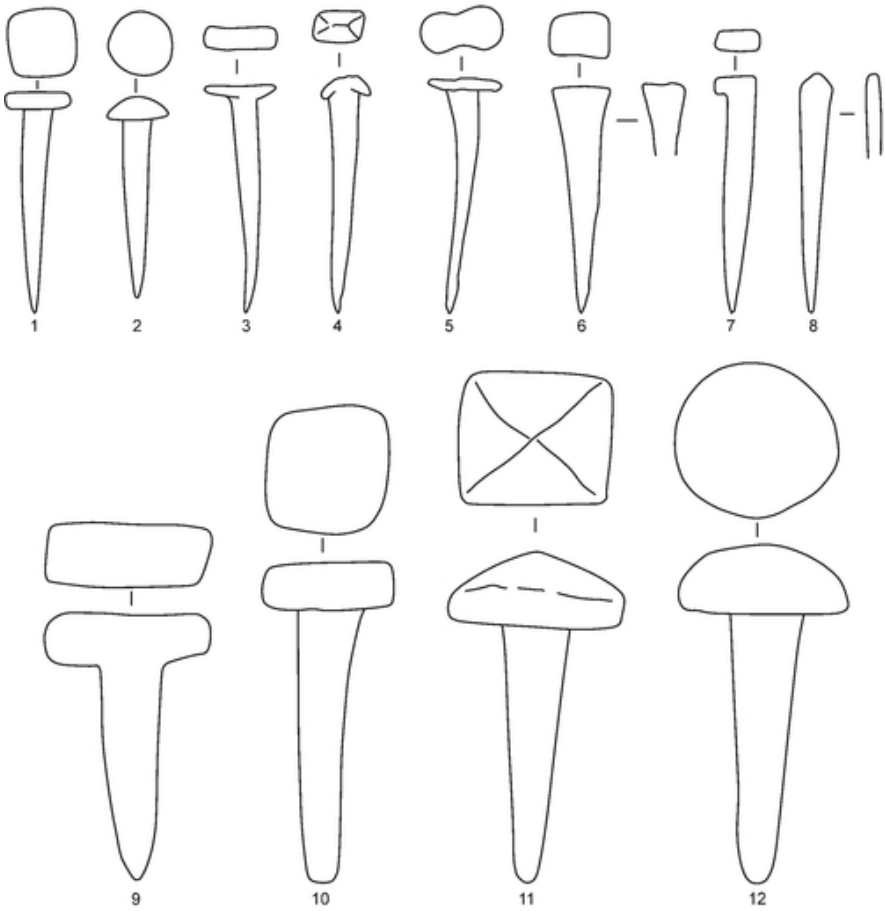



FIGURE 9.1
*Types of medieval nail*

**H254–255** must, however, be related to this method of hanging, particularly since **H254** was found in a gateway through a boundary wall with mortar adhering to its shank. **H255**, which has a cranked shank, must also have been set in the ground.

## *Type 2. Hinge pivots with tapering shanks*

This type of pivot occurs in far greater numbers than any of the other types, and consequently only the more complete or intrinsically interesting examples (**H256– 369**) have been catalogued. The type is commonest because of its simple and practical form, which enabled the shank to be driven into wood or into a masonry joint. most shanks are straight, but the clenched tips of **H256**,

**H309**, **H349**, **H360**, **H365** and others imply that they either passed completely through timber or encountered an obstruction when being driven in. Hinge pivots set in masonry rather than in mortar joints had to be secured in lead, and **H297** and **H347**, and probably **H359**, retain this.

The shanks and guide arms of these hinge pivots are frequently of similar width at their junction, although a number, including **H256**, **H299** and **H330** have deepened shanks. The deepening may be the incidental result of forging, or it may have been intended to give an impression of strength, an illusory impression since the shanks are generally of slender cross section. The turning hinge has worn into the top of the shanks of a number of hinge pivots, including **H292**, **H301**, **H323** and **H352**.

The pivots vary considerably in size, and they clearly carried everything from shutters to large doors and gates. **H264**, **H327**, **H341-342**, **H355** and **H367** were found with hinges, and they provide an indication of the possible uses of those found in isolation.

## *Type 3. Hinge pivots with down-turned shanks*

This type of pivot, of which **H370–379** are examples, was set in a mortice cut in masonry and was normally secured with lead, which survives on **H372–375** and **H379**. Salzman (1967, 296) notes entries at Corfe in 1285: 'to a mason making mortices for setting hooks', and 'to Walter Plogge, who made the mortices in which the hooks for doors and windows were set with lead'. b eing set in the stonework, such hinges are sometimes called 'stone hinges', as at St Paul's in 1490: 'stonehengis with iron hooks', or at Westminster in 1491: 'a pair of iron stonehokes used for hanging the door at Cheynegate'. 'Hooks' and 'crooks' are the normal words for hinge pivot in medieval documents.

**H370–379** characteristically have broad flat shanks which may or may not taper in side view, and which are either parallel-sided or expand towards the down-turned end. **H370–378** may have carried doors or shutters, but the massive shank fragment **H379** must come from a major gateway.

## *Type 4. Hinge pivots with bifurcated shanks*

These hinge pivots were also set in masonry, the bifurcated tip preventing them pulling out as well as anchoring them firmly in place. **H380** and **H381** are complete, the latter as well as the other shank fragments **H382** and **H383** retaining lead caulking. The shanks are all parallel-sided. **H384**, the massive

guide arm from a hinge pivot which probably had a bifurcated shank, is from Wolvesey Palace, Winchester, and must have carried a major gate.

## Hinges

Hinges were used on doors, gates, window shutters, trapdoors and well covers around buildings, as well as on items of furniture such as chests and armoires, and the varied sizes and types of hinge reflect these many uses. The hinges have been classified according to the way in which they were hung. Strap fragments are discussed separately, as are small hinges and bindings which may be from caskets. Documentary references to hinges are discussed by Salzman (1967, 295–299).

### *Hinges with looped eyes*

The looped eyes of this type of hinge, represented by **H385–410**, generally fitted over a hinge pivot, and while the loops are most commonly closed and either forged in with the strap (**H388**) or butted against its rear face (**H390**, **H393**, **H399**) others are open (**H398**). The looped eye is flush with the rear of the strap on **H385–400**, offset on **H401–409**, and cranked on **H410**. In use the hinge was nailed in place in the way demonstrated by **H404**, and the offset looped eyes are particularly well suited for well covers, trapdoors and large doors.

The majority of these types of hinge have horizontal straps, but **H402–403** are crescent-shaped and **H401** is T-shaped.

## *Hinges with nailed U-shaped eyes*

The nailed U-shaped eye found on hinges **H411–448** provided a secure way of attaching iron to wood since in use both the strap and rear terminal of the eye were nailed in place. The same nail sometimes penetrated both strap and terminal (**H420**), or two separate nails were used (**H417**). The guide arm of the hinge pivot fitted into the void between the edge of the door and the hinge eye.

**H411–439** are complete or retain a considerable length of their strap; **H440–445** are U-shaped eyes, **H446–448** are the rear terminals of the eyes. The hinges all have horizontal straps of differing size and form, some parallel-sided, others tapering, some with plain terminals, others bifurcated. To give strength to the eye, the rear arm was almost invariably forged into a terminal which was most frequently lozenge-shaped (**H414**, **H432**, **H446**) but also rounded (**H444**) or rounded and pointed (**H440**, **H448**). The maximum length of most rear arms is 100mm, but added security was given to larger hinges by extending the arm and increasing the number of nailholes. **H413** has such a rear arm, and **H412** may originally have had one.

## *Hinges with spiked U-shaped eyes*

Hinges with this type of eye (**H449–456**) were used in conjunction with end-looped hinges (**H449–456**) particularly on items of furniture such as chests. **H454** in fact, which retains an end-looped stapled hasp, must be from a chest. In use the spiked end of the eye passed through the loop and was then driven into the wood. Small examples of this type of hinge are discussed under casket fittings below, but otherwise **H449–453** have parallel-sided or tapering straps, **H452** a shaped terminal, **H453** a plain one.

## *End-looped hinges*

End-looped hinges were used in conjunction with spiked U-shaped eyed hinges such as **H449–456**, but they also formed part of some stapled hasps, as **H457** indicates. Incomplete end-looped straps such as **H457a** and **H458** could, therefore, be from either stapled hasps or hinges, and the small size of both suggests that they are from caskets. Larger end-looped straps are identical to bucket handle escutcheons, and the two cannot always be certainly

distinguished.

## *Pinned hinges*

The pinned hinge is formed from two straps which turn on a common pin. The single looped projection on the end of one strap fits between a pair on the other, and a pin holds the two together. **H459–471** are pinned hinges, most probably from doors, cupboards or chests, although **H463** carries a stapled hasp which must be from a chest. Several of the pinned hinges are represented by single straps of various shapes, but of those which retain both straps, most (**H469–471**) have identically shaped leaves. **H459**, of a T-shape, is the only one to be certainly asymmetrical.

## Strap hinge terminals

A complete study of hinges cannot be made without reference to those surviving on medieval church doors and items of furniture, and the discussion below excludes detailed consideration of ecclesiastical iron-work. The catalogued hinges, however, come from a wide range of buildings, including peasant houses, town houses, manor houses, castles and churches.

## *C-shaped hinges*

C-shaped hinges are not depicted in English manuscripts before the late 11th century, but this form, often with a central strap, is the commonest type in use on 12th-century English church doors, and it continued in use until the 14th-century.

**H472**, known only form a photograph, must have lost its looped eye. No nail-holes are visible and, like **H402**, it has lost its terminals. The only other C-shaped hinge (**H403**) retains small end-scrolled terminals, and it and the other hinges come from contexts which do not contradict the dating implied by ecclesiastical examples.

## *Strap hinges*

Hinges with straight straps and either parallel or tapering sides are the most

common form of medieval hinge, and they occur with a variety of terminal shapes. **H433**, **H436** and **H473–476** taper to plain ends, whilst **H387** and **H426** have square-cut, slightly up-turned ends. The splayed terminal found on hinges **H406**, **H417–418**, **H427**, **H432**, **H464** and **H477–482** was a simple shape for the blacksmith to forge, as was the rounded terminal of **H417–418**, **H434–435** and **H483–486** and lozenge-shape of **H429**, **H438** and **H487–489**. These simple shapes have little chronological value, and they were clearly in common use on town and village house doors and on the lesser doors of the greater houses. It is of interest that the rounded and lozenge-shaped terminals of some of these hinges reappear on the rear terminals of the eyes of some elaborate scrolled hinges.

The end scroll appears as a subsidiary element in some complex hinge terminals, but on **H403**, a C-shaped hinge, and on **H490**, it is a terminal form in its own right. The bifurcated terminal, found throughout the medieval period on all sizes of hinge (**H386**, **H411**, **H419–420**, **H491–497**), most frequently takes the form of a double scroll. **H419** is exceptional in having a round, perforated end to its one complete terminal arm. The fleur-de-lis form of **H498** is common on early church doors and is related to the complex scrolled terminals common on church doors from the late 12th until the 14th century. **H404** has a cluster of four tight scrolls forming its terminal, several combining forward and backward scrolls with a fleur-de-lis motif (**H499–502**). **H503** has two pairs of scrolls, the inner ones recurved, and **H504** pairs of scrolls attached to the sides of the strap. **H505– 507** are fragmentary scrolls.

## *T-shaped hinges*

Salzman (1967, 297–298) identifies the 'garnet' of medieval documents as T-shaped hinge whose short crossbar was fastened to the frame of the door. Surviving examples are rare, however. **H401** combines the T-shaped strap with a looped eye, but **H459** is pinned.

## *Strap shapes*

most hinges have straps with parallel or tapering sides, but a few are shaped. Isolated expansions occur on **H485–486** and **H508–510**, and side scrolls are forged onto **H504**. Several pinned hinges have shaped straps or plates, and **H511** with its three heart-shaped lobes is probably from such a hinge.

The terminal was the most elaborate part of most hinges, but **H501–502**

have surface decoration as well. **H502** has a narrow bar with simple geometrical chiselled decoration, and **H501** has raised edges and chiselled lines.

## Corner bindings

A number of the strap hinges discussed above must have come from chests or coffins, and these fittings sometimes had their corners reinforced with iron (Eames 1977, pls 38, 41 and 46). **H512** is from a wooden coffin surrounding a lead-encased skeleton, and **H513–514** are of related type, the latter from the position of its nail head evidently set inside the chest or coffin. **H515** and **H516** are lengths of solid corner binding, the latter with holes at the corners for nails.

## Casket fittings

In addition to the larger hinge and strap fragments there are smaller hinges and lengths of binding strip which probably come from portable items of furniture such as caskets, coffers and reliquaries. The hinges, binding strips and mounts on these objects are more usually of copper alloy, but iron was an alternative metal, even if it was forged and plated in imitation of the nobler metal.

### *Hinges*

**H517– 528** are small hinges with, where they are sufficiently complete, looped, spiked and end-looped eyes or pinned hinges. All are shaped in some way, and **H527–528** have elaborate surface decoration as well, the decoration also present on the stapled hasp which the latter supports. Non-ferrous plating has been revealed on several of the hinges, but not analysed.

### *Binding strip and mounts*

The lengths of iron binding strip **H529–559** are generally shaped and moulded, and several also have chiselled decoration. X-radiographs almost invariably reveal nonferrous plating.

**H529–534** are plain lengths of strip, **H534** retaining a complete pointed end

and a small domed rivet, but the remainder are incomplete. **H535–540** are further midlength strips, all straight in side view unless distorted. **H535** has a central ridged section, the others rounded and occasionally moulded expansions. **H541–554** all retain one terminal, but they are otherwise incomplete. **H541–547** have plain strips, **H548–553** have at least one mid-length expansion, and **H554** is bifurcated. The terminals are both rounded and foliate, and a few are moulded, and **H544–545** and **H550** are angled in side view, the others flat. **H555–556** are multi-lobed strips, **H557–559** either sinuous or scrolled, **H558** having surface decoration which recalls that on **H528**.

**H560–564** are short mounts or clamps, originally symmetrical with perforated terminals at each end. Smaller copper-alloy examples were used to hold parts of reliquaries together (Pinder-Wilson and b rooke 1973), and these iron examples may have served a similar purpose on slightly larger caskets. All are flat, and only **H564** has any decoration.

## Stapled hasps

Stapled hasps **H565–590** were used in conjunction with fixed locks on chests, caskets and doors, and they are either end-looped (Type 1) or have pinned hinges (Type 2).

### *Type 1. End-looped stapled hasps*

Stapled hasps **H565 –574** have both rounded and rectangular end loops for attachment to supporting hinges, one of which survives on **H570**. This hinge has a spiked U-shaped eye like those of **H449–456**, the spike being driven into the wood of the chest from which the hasp no doubt came.

## *Type 2. Stapled hasps with pinned hinges*

Stapled hasps **H575–583** all have pinned hinges, which survive in varying degrees of completeness on **H577– 578**, **H580–581** and **H583**. The method of assembling the pinned hinge is most clearly demonstrated by **H580**, and this indicates how the single central looped eye of the less complete examples operated.

## *Incomplete stapled hasps*

**H584–590** are fragmentary shaped hasps incapable of certain classification.

## *Discussion*

Stapled hasps were used with fixed locks with sliding bolts such as **H142–146**, the bolts passing through the D-shaped staples and closing the lock. medieval chests show that the straps or hinges to which the stapled hasps were attached were nailed either to the outside or inside of chest lids (Jenning 1974, pls I–V, VII; e ames 1977, pls 36, 37A, 38, 45, 48–52), and that the locks were either set flush with or behind the face of the wood, or projected beyond its face. most stapled hasps are straight in side view, indicating their use with locks set flush with the wood, but a few (**H572–573** and **H583**) are angled. many have a hooked or thickened base which enabled them to be lifted out of the lock when released, and this is frequently simply shaped as on **H569**, **H576** and **H581**, but on **H572**, **H574** and **H577** it is moulded. **H571** and **H579** have simple raised bars, **H590** a knob. The hasps vary in shape, some such as **H570**, **H571** and **H581** bring more or less plain rectangles with or without a shaping to the tip, while others taper in one or other direction or expand around the staple. The L -shaped staple hasp **H590** is similar in shape to some plate hasps on a late 14th-century chest at Winchester College (Eames 1977, 165–167, pl 46b). Surface decoration is found on **H577**, **H583** and **H585**, and several have non-ferrous plating.

End-looped stapled hasps are found in contexts of 11th to 14th-century date, whereas pinned stapled hasps are known throughout the medieval period.

## Hasps

Hasps were used to hold gates and doors on buildings closed and to fasten the lids of coffers and chests, and they are of two main types: looped or pinned. The former is more commonly found. In use the hasp fitted over a projecting staple, where it was secured by a padlock. On gates in particular, where secure locking was not required, simple wooden sticks may have been used instead.

## *Type 1. Looped hasps*

Looped hasps are most frequently figure-eight shaped (**H591–626**), but a few are of elongated oval shape (**H627-629**). The figure-eight shape is the more secure of the two since one of its two loops was used for suspension while the other closed round the staple to which a padlock could be fixed. The figure-eight shaped hasps characteristically have two unequal loops formed by narrowing the central opening. The degree of narrowness varies, the sides sometimes touching, and a few (**H624– 626**) actually have solid or near solid centres which create two independent loops in one hasp. Figure-eight shaped hasps may be further sub-divided; **H591–595** are flat, **H596–618** and **H624** curved, and **H619–623** and **H625– 626** angled. This shaping reflects the way in which they were used, and the reconstruction of well cover **H404** shows the curved hasp **H624** in place on the edge. A medieval chest in l ancham church, Nottinghamshire (mercer 1969, pl 28) has both straight and angled hasps. The elongated and shaped hasps **H627–629** are similarly straight, angled and curved.

The majority of hasps have hooked ends which enabled them to be lifted with greater ease, and **H596** has a ring. It is impossible to be certain that all those without hooks or rings are hasps, since some could be chain links, but **H604** is certainly a hasp since it retains part of the end-looped hinge **H457** which attached it to a chest. The hasps are mainly of plain iron, but a few are spirally twisted. The spirally twisted hasps are restricted to 12th and 13th-century contexts whereas plain ones are found throughout the medieval period.

## *Type 2. Pinned hasps*

**H630–631** are pinned hasps, both with pairs of looped eyes which originally joined a pinned strap. Chests with similar hasps include one in the Public r

ecord Office, London (Jenning 1974, 4–5, pl VI).

## *Incomplete hasps*

**H632–633** are parts of broken hasps, **H632** from a figure-eight shaped hasp, **H633** not classifiable but of interest for its elongated hooked end which may have held a ring, as do those on a 13th-century chest from Voxtorp, Sweden (mercer 1969, pl 29).

## Keyhole plates

manuscript illuminations sometimes show shaped metal plates around keyholes on doors, and **H634–638** are excavated examples of triangular, rectangular and elongated oval shape. All have nail-holes at the corners or ends for small nails or studs. **H639** has no deliberate hole and may have been used for decorative effect to balance a keyhole plate such as **H634**.

## Handles

Door handles and carrying and lifting handles from chests and caskets are mainly rectangular and circular shape. **H640–648** are rectangular drop handles which were held in place by U-shaped or looped staples around each arm. A number of the small handles may be from caskets, but the others are more likely to be from chests, although actual examples on medieval chests are frequently curved rather than flat in side view (Jenning 1974, pl VI; Eames 1977, pls 49, 51A, 52). The rectangular and U-shaped handles **H649–650** and **H653** have perforated terminals and may be from chest or casket lids. The basal straps of **H651–652** imply that they may come from trapdoors or hatches.

Ring handles such as **H654–657** may be from house doors or from furniture, since a 14th-century representation of a house (Hartley and Elliott 1931, pl 27c) shows one on a door, and they are also found on items of furniture such as armoires (Eames 1977, pls 4–6). On chests similar rings frequently acted as lifting rings, as with two pairs on a chest in Hereford Cathedral (Eames 1977, pls 50A–b) and the rows of rings on one from Voxtorp, Sweden (mercer 1969, pl 29). Larger lifting rings similar to **H657** but suspended from chains or long iron arms are known on chests from Cound, Shropshire (Eames 1977, pl 42b) and london (Jenning 1974, pl VI). The latter chest also has subsidiary handles similar to **H658–659**.

The precise use of M-shaped handles **H660–662** is uncertain, but **H660** and **H662** appear to have pivoted. The broken flattened end of **H660** may imply a use connected with a lock.

## Latches and latch rests

Latches, frequently termed ‘haggadays’, occur in a number of medieval

documents (Salzman 1967, 299– 300), and at Hadleigh Castle there is mention in 1363 of '6 rings with lacches and kacches', the rings forming the handle by which the latch was raised. Iron rings of various sizes are known, and no latch has yet been certainly recognised, but **H663–671** are probably the 'kacches' or latch rests.

Latch rests **H663–671** were set in the jambs and reveals of doors and windows to hold latches closed, and all have triangular-shaped heads with blunted ends. **H663–669** have tapering shanks which, like those of hinge pivots, were driven into wood or into masonry joints. The tip of the shank of **H667** is clenched, indicating that is passed completely through the wood it was driven into, and those of **H668–669** are bent through a right angle. **H670** is of unusual form in having a slender split shank, unfortunately incomplete, which may be from a furniture door or an internal door in a building. **H671** was set in a cut stone mortice since its shank retains the lead caulking which secured it in place. The hole in the base of the head may have held a link or chain.

## Door flail

Salzman (1967, 301) notes that folding doors and entrance gates were often fastened by means of a 'flail' or 'sweep', an iron bar pivoted at the centre so that when the gates were shut it could be brought horizontally across them, each end fitting into an iron hook or plate which was often provided with a hasp by which the bar could be locked in position. **H672**, a flat strap with tapered ends and central rivet hole, may be such a flail.

## Door bolts

**H673–681** are sliding door bolts of various types, **H673– 679** having straight bolts with single finger grips, shaped and decorated on **H678** and extended on **H679**. **H680** has a cranked, stapled handle which suggests that it was used in conjunction with a projecting fixed lock, as is the bolt on a 12th-century armoire at Obazine, France (Eames 1977, 21–25, pls 10–11). A 15th-century armoire from malines, Belgium, has straight stapled handles in use with flush-set locks (e ames 1977, 29–30, pls 14–15).

**H681** is the most substantial door bolt, and in use its short cranked arm was bedded in the door jamb. One of two U-shaped mounts survives, and **H682** is another from a different site.

## Door and window hooks

Hooks **H683–685** may have been used to hold either doors or windows open. All have looped ends which are formed in differing ways and short hook arms.

## Window ironwork

Iron used in window construction served the three purposes of strengthening the construction, excluding intruders and supporting any glazing (Salzman 1967, 291–292). The ironwork of a window, consisting of upright and transverse bars, was sometimes known as a 'ferment', and windows of more than one light usually had a horizontal 'stay-bar' running from side to side through the mullion, and a number of smaller bars, parallel to it, in each light. b ars made with eyes to fit round the upright 'standards' are often called 'lockets' in medieval documents, and the smaller bars to which glazing was wired and soldered, 'soudelets' (Salzman 1967, 293).

A number or iron grilles and individual bars from them are known, but a significant find are eight blocks of Totternhoe stone from a window probably inserted in a cellar at the palace in Kings l angley in 1388. The window **H686** originally contained an iron grille with eight horizontal and six vertical bars, but only the mortices now survive. Their position indicates that the horizontal bars must have had eyes for the passage of the vertical ones.

Three iron grilles **H687–689**, distorted and incomplete, are known from

Weoley Castle. **H687** has five horizontal bars with lead caulking on each complete arm end and rectangular slots for four vertical bars. **H688–689** have horizontal bars which, where complete, have five eyes for the vertical rods. **H690–693** are further eyed window bar fragments with rounded and rectangular eyes either set centrally or offset. The precise position will have determined how near any shutters could close against them in an unglazed window. **H694–697** are probably incomplete vertical window bars, the last a stub set in lead caulking.

Small windows did not require grills with horizontal and vertical members, and individual horizontal bars such as **H698–705** were used. **H698–699** were probably set in mortices cut in stonework, and the others nailed onto timber window frames.

**H706** is the type of window bar found in use in churches, cathedrals and other buildings with large glazed windows. It was nailed against the inner edge of a timber window frame and the leaded panel of glass rested on the backs of the seven internally projecting plates. Wedges through these plates prevented the glass above and below the bar from moving.

Grilles were not restricted to windows. At Launceston in 1460, 86 lb of iron was used 'for mending a grill which lies over le pitte in which thieves and felons are put in ward' (Salzman 1967, 293), and an iron sluice gate was found in a drain at Prestbury moat, Gloucestershire (O'Neil 1956, 15).

**H1 CRAMP**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
back straight, arms complete. L 125mm.
Goodall 1975a, 86, fig 40.78.

**H2 CRAMP** (not illustrated)
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
back broken and distorted, one arm lost.
Goodall 1979c, 129, no. 26.

**H3 CRAMP**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
b ack straight, arms near complete.
L 125mm.
Goodall 1988, fig 75.29; borenius and
Charlton 1936.

**H4 CRAMP**
Southampton, Hampshire.
1350 –1400.
broken cramp retaining lead caulking.
L 88mm.
Harvey 1975b, 285, fig 255.2074.

**H5 CRAMP**
Newminster Abbey, Northumberland.
Site: 1137 to early 16th century.
back broken, flat curved arm. L 168mm.
Harbottle and Salway 1964, 168, fig 30.83.

**H6 CRAMP**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
back straight, arms complete. L 146mm.
Goodall 1979c, 129, fig 20.25.

**H7 CRAMP**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
Distroted straight back, arms complete.
L 116mm.
DAMHb Collection, London, RVA 226(L).

**H8 CRAMP**
Rievaulx Abbey, North Yorkshire.
Site: 1138–1538 with later robbing.
Distorted, straight back, arms complete.
L 134mm.
DAMHB Collection, London, RVA 226(C).

**H9 CRAMP**
Rievaulx Abbey, North Yorkshire.
Site: 1138–1538 with later robbing.
Distorted straight back, arms complete.
L 145mm.
DAMHB Collection, London, RVA 226(M).

**H10 TIMBER DOG**
Wintringham, Cambridgeshire.

Site: late 12th to early 14th century.
Straight back, broken down-turned ends.
L 202mm.
Goodall 1977a, 257, fig 45.53.

**H11 TIMBER DOG**
Bayham Abbey, East Sussex.
In rubble from frater in southern cloister walk. Medieval.
Broken back, one complete end. L 101mm.
Goodall 1983a, 106, no. 9.

**H12 TIMBER DOG**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Broken straight back and down-turned end.
L 72mm.
Goodall 2002, fig 7.3, no. 41.

**H13 TIMBER DOG**
Winchester, Hampshire.
14th–?15th century.
Incomplete. l 86mm.
Goodall 1990-10, fig 78.513.

**H14 TIMBER DOG**
Aldingham, Lancanshire.
Mid 12th century.
Strap broken. L 145mm.
Excavated by B K Davison.

**H15 TIMBER DOG**
Princes r isborough, b uckinghamshire. 13th century to late 14th or early 15th century.
Broken straight back, one complete down-turned end. L 114mm.
Pavry and Knocker 1953–60, 163, fig 13.9.

**H16 TIMBER DOG**
Oxford.
16th century.
One arm broken. W 127mm.
Excavated by N Palmer.

**H17 BEAM STIRRUP(?)**
Waltham Abbey, Essex.
*c*1540.
Strap with broken ends pointing in opposite directions. l 183mm.
Huggins 1972. From f64, Building I.

**H18 HOOKED BRACKET**
Northampton.
*c*1470 to 1500.
Bracket with tapering shank, projecting stop and semicircular section U-shaped hook.
W 127mm.
Goodall 1978c, 152, fig 24.5.

**H19 ANGLE TIE**
King's Lynn, Norfolk.
*c*1350–1500.
Complete. L 67 by 44mm.
Goodall and Carter 1977, 296, fig 134.58.

**H20 ANGLE TIE**
London.
?Late 13th to mid 14th century.
One arm broken. L 62 by 60mm.
Henig 1974, 195, fig 40.107.

**H21 ANGLE TIE**
Winchester, Hampshire.
Late 13th–?early 14th century.
Arms complete. L 76 by 57mm.
Goodall 1990-10, fig 79.539.

**H22 ANGLE TIE**
Criccieth Castle, Gwynedd.
Site: *c*1220 to 1404.
One arm broken. L 74 by 52mm.
O'Neil 1944–45, 42, pl X.23.

**H23 ANGLE TIE**
North e lmham Park, Norfolk.
*c*1150 to *c*1600.
One arm broken. L 112 by 22mm.

Goodall 1980a, 513, fig 267.84.

**H24 ANGLE TIE**
Winchester, Hampshire.
Late 12th–?early 13th century.
One arm broken. L 143 by 90mm.
Goodall 1990-10, fig 79.538.

**H25 ANGLE TIE**
Ospringe, Kent.
*c*1483 to 1550.
One arm broken. L 175 by 25mm.
Goodall 1979c, 129, fig 20.27.

**H26 TIE**
Duffield Castle, Derbyshire.
Keep built 1177–90, demolished 1266.
Incomplete shaped tie with clenched tip.
L 157mm.
Derby Museum. Cox 1887.

**H27 TIE**
Pleshey Castle, e ssex.
Post-1140 or possibly 1180 to late 12th or earlier 13th century.
Incomplete shaped tie with clenched tip.
L 43mm.
Goodall 1977c, 177, fig 39.28.

**H28 TIE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Incomplete shaped tie. L 138mm.
Goodall 1988, fig 80.89. For site borenius and Charlton 1936.

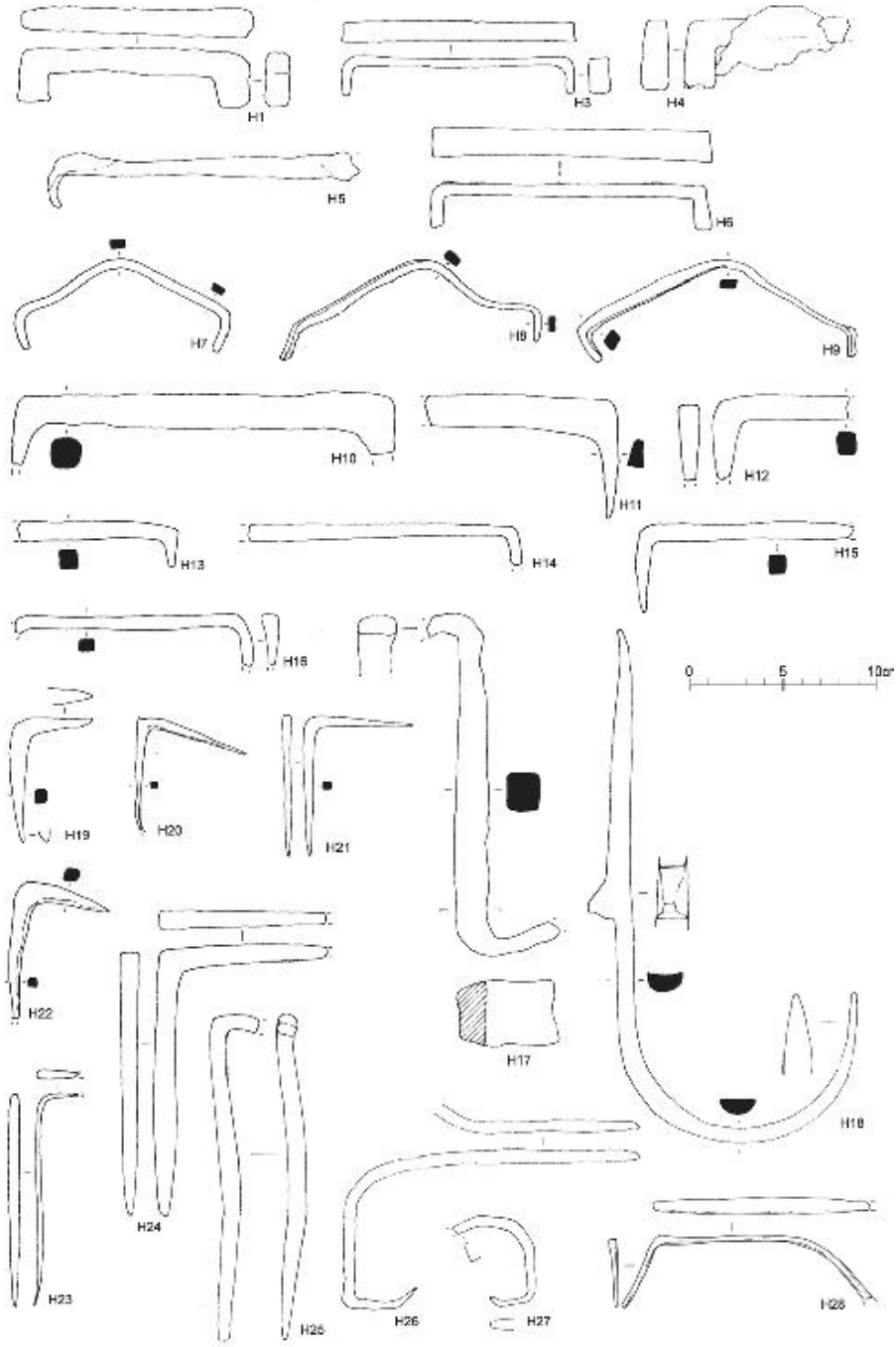



FIGURE 9.2
*Cramps, timber dogs, beam stirrup, hooked bracket, angle ties, and ties*

**H29 STAPLE**
Northampton.

Later 15th century.
Rectangular staple, arm broken. L 35mm, W 20mm.
Goodall *et al* 1979, 273, fig 119.72.

**H30 STAPLE**
Oxford.
Late 12th century to *c*1250.
Rectangular staple. L 23mm, W 22mm.
Goodall 1977e, 142, fig 26.22.

**H31 STAPLE**
Northampton.
*c*1250 to 15th century.
Rectangular staple, one arm broken.
L 30mm, W 24mm.
Goodall *et al* 1979, 273, fig 119, 71.

**H32 STAPLE**
Goltho Manor, Lincolnshire.
*c*110 0 –1150.
Rectangular staple, arms broken. L 31mm, W 26mm.
Goodall 1987, fig 158.79.

**H33 STAPLE**
Strixton, Northamptonshire.
Late 13th century.
Rectangular staple, arm broken. L 46mm, W 26mm.
Hall 1973, 113, fig 4.32.

**H34 STAPLE**
Clough Castle, Co. Down.
*c*1200 to *c*1225.
Rectangular staple, arms broken. L 51mm, W 34mm.
Waterman 1954, 140, fig 12.7.

**H35 STAPLE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
r ectangular staple, arms broken. L 45mm, W 46mm.
Goodall 1979a, 118, SF 12423.

**H36 STAPLE**

Wintringham, Cambridgeshire.
Site: late 12th to early 14th century.
Rectangular staple, arms broken. L 56mm, W 53mm.
Goodall 1977a, 257, fig 45.46.

**H37 STAPLE**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Rectangular staple, arms broken. L 93mm, W 50mm.
Goodall 2002, fig 7.3, no. 35.

**H38 STAPLE**
Northampton.
Robbing of late 15th, early 16th-century building.
Rectangular staple, arms broken. L 71mm, W 54mm.
Goodall *et al* 1979, 273, fig 119.73.

**H39 STAPLE**
Castell-y-b ere, Gwynedd.
Site: *c*1221 to 1295.
Rectangular staple. L 128mm, W 56mm.
Butler 1974, 97, fig 8.22.

**H40 STAPLE**
Waltham Abbey, Essex.
15th century.
Rectangular staple, internal shaping, arms broken. L 76mm, W 58mm.
Goodall 1978d, 158, fig 21.7.

**H41 STAPLE**
Criccieth Castle, Gwynedd.
Site: *c*1230 to 1404.
Rectangular staple, broken shaped arms.
L 62mm, W 62mm.
O'Neil 1944–45, 41, pl X.21.

**H42 STAPLE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Rectangular staple, arms broken. L 73mm, W 60mm.
Goodall 1979c, 129, fig 20.28.

**H43 STAPLE**
Waltham Abbey, Essex.
Lower topsoil over destruction debris of 1540.
Rectangular staple. L 101mm, W 63mm.
Huggins 1972, 124.

**H44 STAPLE**
Wintringham, Cambridgeshire.
Site: late 12th to early 14th century.
Rectangular staple, arms broken. L 96mm, W 64mm.
Goodall 1977a, 257, fig 45.48.

**H45 STAPLE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
rectangular staple, one arm broken. L 67mm, W 65mm.
Goodall 1975a, 86, fig 40.81.

**H46 STAPLE**
Northolt m anor, Greater l ondon.
1300–1350.
Rectangular staple, arms broken. L 91mm, W 69mm.
Excavated by J G Hurst.

**H47 STAPLE**
Alsted, Surrey.
*c*1250–1405.
Rectangular staple, arms broken. l 70mm, W 74mm.
From Site 3. See Ketteringham 1976.

**H48 STAPLE**
Wroughton Copse, Fyfield Down, Wiltshire.
*c*1150 to 1315.
Rectangular staple. l 144mm, W 80mm.
Excavated by P J Fowler.

**H49 STAPLE**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Rectangular staple. l 97mm, W 88mm.
Goodall 1980a, 513, fig 267.75.

**H50 STAPLE**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Rectangular staple, broken arms. L 87mm, W 96mm.
Goodall 1980a, 513, fig 267.76.

**H51 STAPLE**
Lyveden, Northamptonshire.
*c*1250 to 1350.
Rectangular staple, arms broken. L 5mm, W 33mm.
Steane and Bryant 1975, 132, fig 49.162.

**H52 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple. L 29mm, W 40mm.
Excavated by N Macpherson-Grant.

**H53 STAPLE**
King's l ynn, Norfolk.
*c*1250 to 1350.
Rectangular staple. L 34mm, W 40mm.
Goodall and Carter 1977, 296, fig 134.55.

**H54 STAPLE**
Lyveden, Northamptonshire.
1475 to 1500.
Rectangular staple, arm broken. L 22mm, W 44mm.
Steane and Bryant 1975, 132, fig 50.171.

**H55 STAPLE**
Stonar, Kent.
*c*1275 to 1485.
Rectangular staple, back distorted. l 17mm, W 44mm.
Excavated by N Macpherson-Grant.

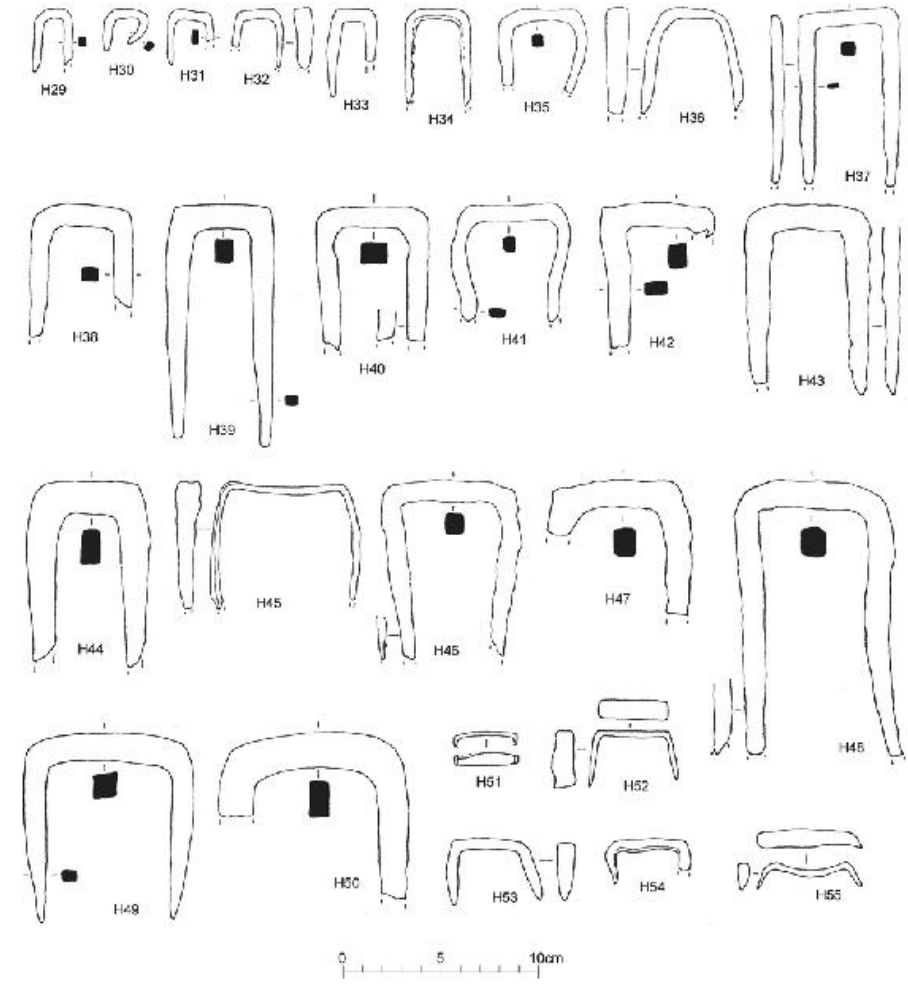



FIGURE 9.3
*Staples*

**H56 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple, arms broken, wood graining across underside. l 20mm, W 44mm.
Excavated by N Macpherson-Grant.

**H57 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple. l 29mm, W 48mm.
Excavated by N Macpherson-Grant.

**H58 STAPLE**
Tattershall College, lincolnshire.
11th century to 1440.
Rectangular staple, arm broken. L 13mm, W 51mm.
Excavated by L J Keen.

**H59 STAPLE**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Rectangular staple, arms broken. L 19mm, W 52mm.
Goodall 2002, fig 7.3, no. 34.

**H60 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple, arms broken, wood graining across underside. l 16mm, W 54mm.
Excavated by N Macpherson-Grant.

**H61 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple, broken, with wood graining across underside. L 15mm, W 54mm.
Excavated by N Macpherson-Grant.

**H62 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple, one arm broken, wood graining across underside. L 25mm, W 58mm.
Excavated by N m acpherson-Grant.

**H63 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Rectangular staple. l 19mm, W 58mm.
Excavated by N Macpherson-Grant.

**H64 STAPLE**
Stonar, Kent.
*c*1225 to 1275.

Rectangular staple, arms broken. L 17mm, W 58mm.
Excavated by N Macpherson-Grant.

**H65 STAPLE**
Faringdon Clump, Oxfordshire.
Late 13th to 14th century.
Rectangular staple, one arm distorted.
W 59mm, l 17mm.
Ashmolean museum, Oxford. Leeds 1936; 1937.

**H66 STAPLE**
Lyveden, Northamptonshire.
*c*1350 to 1450.
Rectangular staple, arms broken. L 11mm, W 62mm.
Steane and Bryant 1975, 133, fig 50.175.

**H67 STAPLE**
Waltham Abbey, e ssex.
13th century.
Rectangular staple. L 32mm, W 60mm.
Excavated by P J Huggins. Romeland, F64.

**H68 STAPLE**
Oxford.
Late 12th century to *c*1250.
Rectangular staple, arms broken. L 11mm, W 61mm.
Goodall 1977e, 142, fig 26.26.

**H69 STAPLE**
Northampton.
?Late 14th–15th century to 17th century.
Broken rectangular staple. L 35mm, W 64mm.
Goodall 1979b, 71, fig 17.22.

**H70 STAPLE**
Waltham Abbey, e ssex.
Second half 15th century.
Rectangular staple, one arm broken. L 18mm, W 73mm.
Excavated by P J Huggins. Romeland, F111.

**H71 STAPLE**
Grenstein, Norfolk.

Late 14th,?early 15th century.
Rectangular staple, arms broken. L 15mm, W 72mm.
Goodall 1980c, fig 77, no. 25.

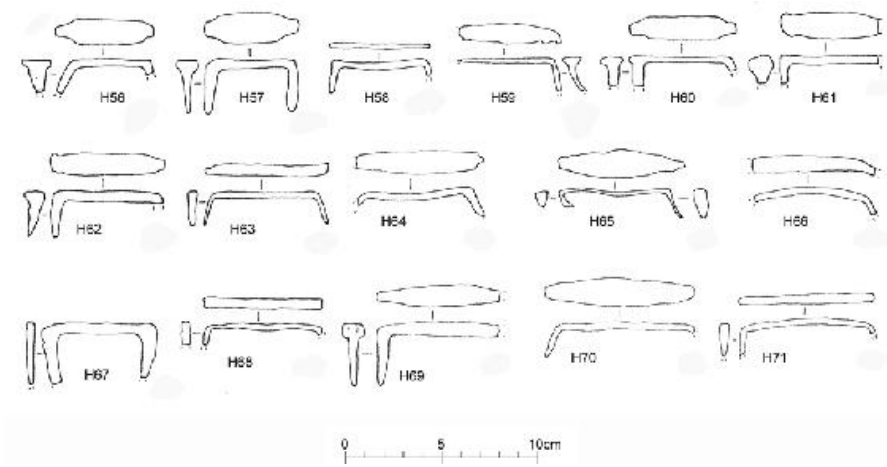



FIGURE 9.4
*Staples*

**H72 STAPLE**
Lyveden, Northamptonshire.
Early 13th century to first half 14th century.
Rectangular staple. L 19mm, W 69mm.
Rryant and Steane 1969, 44, fig 18j.

**H73 STAPLE**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Rectangular staple. L 51mm, W 76mm.
Salisbury and South Wiltshire Museum, Salisbury, 8/1932, O.S.C112.

**H74 STAPLE**
Winchester, Hampshire.
13th century.
Distorted rectangular staple. L 28mm, W 76mm.
Goodall 1990-10, fig 78.527.

**H75 STAPLE**
Waltham Abbey, e ssex.
Destruction level of 1540.
Rectangular staple. L 33mm, W 82mm.

Huggins 1972, 124 (from F64).

**H76 STAPLE**
Wintringham, Cambridgeshire.
Site: late 12th to early 14th century.
Rectangular staple, arms broken. l 33mm, W 84mm.
Goodall 1977a, 257, fig 45.52.

**H77 STAPLE**
Wroughton Copse, Fyfield Down, Wiltshire. *c*1150 to 1315.
Rectangular staple, arms broken. l 15mm, W 85mm.
Excavated by P J Fowler.

**H78 STAPLE**
London.
Late 15th to early 16th century.
Rectangular staple, arms distorted or Broken. L 33mm, W 88mm.
Excavated by F Willmot. Site at 66 Foyle Road.

**H79 STAPLE**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Rectangular staple, arm broken. L 22mm, W 98mm.
Goodall 1980a, 513, fig 267.81.

**H80 STAPLE**
Upton, Gloucestershire.
Late 13th to late 14th century.
Rectangular staple, one arm broken.
L 48mm, W 105mm.
Hilton and Rahtz 1966, 121, fig 14.20.

**H81 STAPLE**
London.
Late 15th to early 16th century.
Rectangular staple, one arm broken. l 37mm, W 106mm.
Excavated by F Willmot. Site at 66 Foyle Road.

**H82 STAPLE** (not illustrated)
Winchester, Hampshire.
13th century.
Distorted and broken rectangular staple with inturned arms. L 37mm, W

33mm.
Goodall 1990-10, 335, no. 531.

**H83 STAPLE**
London.
Around later 14th century.
Rectangular staple with inturned arms, one Broken. l 20mm, W 35mm.
Henig 1974, 195, no. 111.

**H84 STAPLE**
Dyserth Castle, Clwyd.
Site: 1241 to 1263.
Rectangular staple, inturned arms. l 14mm, W 40mm.
National museum of Wales, Cardiff, 15–248/14.

**H85 STAPLE**
Winchester, Hampshire.
13th century.
Rectangular staple with inturned arms.
L 34mm, W 40mm.
Goodall 1990-10, fig 78.532.

**H86 STAPLE** (not illustrated)
Winchester, Hampshire.
Mid 12th–early 13th century.
Rectangular staple with inturned arms.
L 22mm, W 42mm.
Goodall 1990-10, 335, no. 529.

**H87 STAPLE**
Wroughton Copse, Fyfield Down, Wiltshire.
*c*1150 to 1315.
Distorted rectangular staple with inturned arms. l 23mm, W 44mm.
Excavated by P J Fowler.

**H88 STAPLE**
London.
Late 13th to 14th century.
Rectangular staple, arms?distorted.
L 22mm, W 45mm.
Henig 1974, 195, no. 115

**H89 STAPLE**
Goltho m anor, lincolnshire.
*c* late 11th century.
Rectangular staple, inturned arms. L 35mm, W 49mm.
Goodall 1987, fig 158.82.

**H90 STAPLE**
Winchester, Hampshire.
Mid 13th century.
Rectangular staple, one arm broken, other with inturned end. l 16mm, W 92mm.
Goodall 1990-10, 335, no. 530.

**H91 STAPLE**
London.
Late 13th to 14th century.
Severely distorted rectangular staple with inturned arm. L 17mm approx. W 53mm.
Henig 1974, 195, no. 100.

**H92 STAPLE**
Faxton, Northamptonshire.
Site: 12th to 15th century.
Rectangular staple with broken inturned arms. l 21mm, W 57mm.
Excavated by L A S Butler.

**H93 STAPLE**
King's Lynn, Norfolk.
*c*1250–1350.
Rectangular staple with inturned arms.
L 22mm, W 57mm.
Goodall and Carter 1977, 296, fig 134.56.

**H94 CRAMP**
Northampton.
Late 13th to 15th century.
Broken rectangular cramp. L 45mm, W 92mm.
Goodall 1979b, 71, fig 17.19.

**H95 STAPLE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.

Rectangular staple with inturned arms.
L 59mm, W 114mm.
Goodall 1979c, 129, fig 20.29.

**H96 STAPLE**
London.
Late 13th to mid 14th century.
Rectangular staple with clenched inturned arms, one broken. l 20mm, W 34mm.
Henig 1974, 195, fig 40.110.

**H97 STAPLE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Rectangular staple with incomplete clenched, inturned ends. L 19mm, W 42mm.
Goodall 1975a, 86, fig 40.80.

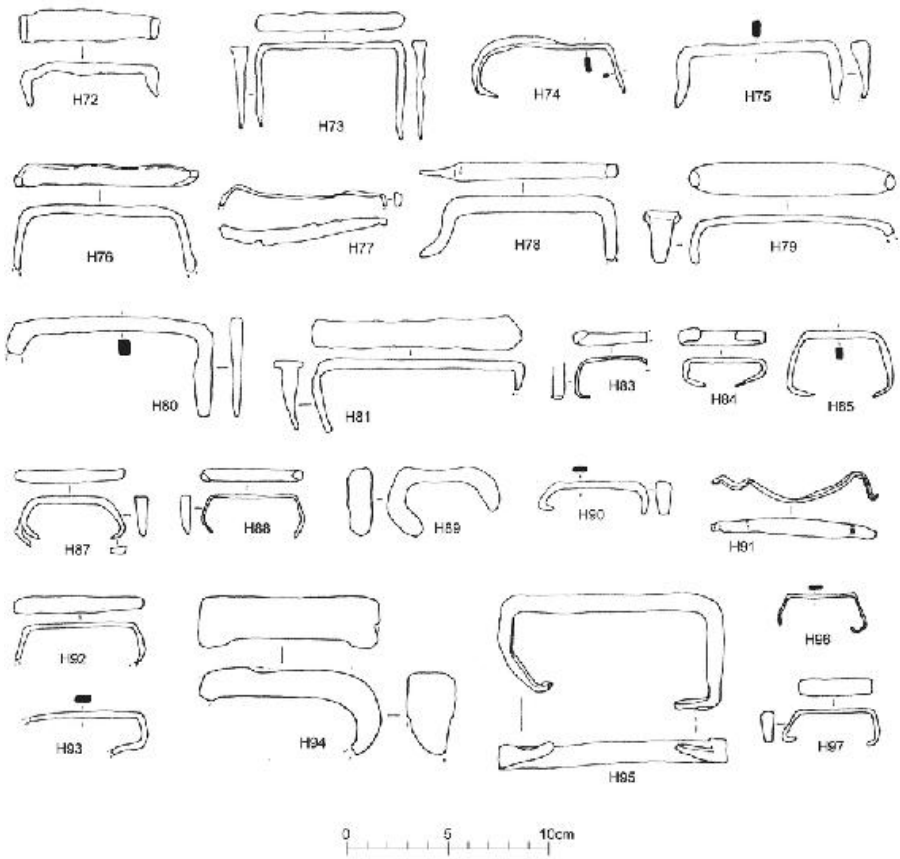


FIGURE 9.5
*Staples*

**H98 STAPLE**
Wintringham, Cambridgeshire.
Late 13th century.
Rectangular staple, clenched inturned arms.
L 16mm, W 48mm.
Goodall 1977a, 257, fig 45.51.

**H99 STAPLE**
Netherton, Hampshire.
Medieval.
Rectangular staple with clenched inturned arms. L 21mm, W 52mm.
Goodall 1990-28, fig 9.4, no. 197.

**H100 STAPLE**
London.
Roman to 14th century (probably medieval).
Rectangular staple with clenched inturned arms. L 18mm, W 58mm.
Henig 1974, 195, no. 119, from XIV -7, not XXI-7.

**H101 STAPLE**
Wroughton Copse, Fyfield Down, Wiltshire. *c*1150 to 1315.
Rectangular staple with clenched inturned arms, one broken. L 16mm, W 59mm.
Excavated by P J Fowler. WC 460.

**H102 STAPLE**
Goltho Manor, lincolnshire.
*c*110 0 –1150.
Rectangular staple with clenched inturned arms, one broken. L 24mm, W 59mm.
Goodall 1987, fig 158.83.

**H103 STAPLE**
Durham.
Later 11th–mid 12th century.
Rectangular staple with clenched inturned arms, one broken. L 62mm, W 43mm.
Carver 1979, 18, fig 13.69/1607.

**H104 STAPLE**

Winchester, Hampshire.
*c*1093.
Rectangular staple with inturned arms.
L 22mm, W 65mm.
Goodall 1990-10, fig 78.528.

**H105 STAPLE**
Burnham Church, Humberside.
*c*1300–1320 rebuilding.
Rectangular staple with broken, clenched, inturned arms. l 26mm, W 64mm.
Excavated by G Coppack.

**H106 STAPLE**
London.
Late 13th to 14th century.
Rectangular staple with clenched inturned arm. l 12mm, W 79mm.
Henig 1974, 195, no. 114, from III-16, not II-16.

**H107 STAPLE**
Lyveden, Northamptonshire.
Second half 13th century.
U-shaped staple, one arm broken. l 33mm, W 14mm.
b ryant and Steane 1971, 65, fig 17t.

**H108 STAPLE**
Winchester, Hampshire.
13th century.
U-shaped staple, tips distorted. l 37mm, W 18mm.
Goodall 1990-10, fig 78.521.

**H109 STAPLE**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
U-shaped staple. l 40mm, W 25mm.
Goodall 2002, fig 7.3, no. 37.

**H110 STAPLE**
Northampton.
14th century.
U-shaped staple. l 44mm, W 28mm.
Goodall *et al* 1979, 273, fig 119.69.

**H111 STAPLE**
Grenstein, Norfolk.
Late 14th,?early 15th century.
U-shaped staple, arms broken. l 45mm, W 24mm.
Goodall 1980c, fig 77, no. 26.

**H112 STAPLE**
Northampton.
Late Saxon to 15th century.
U-shaped staple. l 47mm, W 22mm.
Goodall *et al* 1979, 273, fig 119.70.

**H113 STAPLE**
Rhuddlan, Clwyd.
1241–64.
U-shaped staple. l 48mm, W 17mm.
Goodall 1994, fig 17.3, no. 34.

**H114 STAPLE**
London.
?Late 13th to mid 14th century.
U-shaped staple, one arm broken. L 50mm, W 12mm.
Henig 1974, 195, fig 40.116.

**H115 STAPLE**
Bramber Castle, West Sussex.
?14th century.
U-shaped staple, arms broken. L 50mm, W 23mm.
Barton and Holden 1977, 66, fig 20.16.

**H116 STAPLE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
U-shaped staple, arm tips broken. L 52mm, W 24mm.
Goodall 1975a, 86, fig 40.84.

**H117 STAPLE**
Lyveden, Northamptonshire.
*c*1250 to 1350.
U-shaped staple, one arm broken. l 51mm, W 29mm.
Steane and Bryant 1975, 133, fig 50.176.

**H118 STAPLE**
London.
Late 13th to mid 14th century.
U-shaped staple, one arm tip broken, other distorted. l 52mm, W 27mm.
Henig 1974, 195, no. 112.

**H119 STAPLE**
Weoley Castle, Birmingham, West Midlands.
*c*1200 to 1230.
U-shaped staple. l 53mm, W 26mm.
Oswald 1962, 130, fig 51.7.

**H120 STAPLE**
Winchester, Hampshire.
13th century.
U-shaped staple, one arm broken. L 55mm, W 23mm.
Goodall 1990-10, fig 78.520.

**H121 STAPLE**
York .
Later 12th or early 13th century.
U-shaped staple, arms distorted. l 56mm, W 25mm.
Addyman and Priestley 1977, 139, 143, fig 10.18.

**H122 STAPLE**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
U-shaped staple, one arm broken. L 58mm, W 29mm.
Goodall 1979a, 118, fig 61.23.

**H123 STAPLE**
Cheddar, Somerset.
?Late 13th century to *c*1600.
Distorted U-shaped staple. l 56mm, W 28mm.
Goodall 1979d, 272, fig 91.53.

**H124 STAPLE**
Northampton.
13th century.
U-shaped staple. l 57mm, W 31mm.
Goodall *et al* 1979, 273, fig 119.67.

**H125 STAPLE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
U-shaped staple, arms broken. l 55mm, W 30mm.
Macdonald and Laing 1974–75, 148, fig 11.26.

**H126 STAPLE**
Kettleby Thorpe, lincolnshire.
14th to early 15th century.
U-shaped staple, arms broken. l 54mm, W 35mm.
From House 1. See Goodall 1974a.

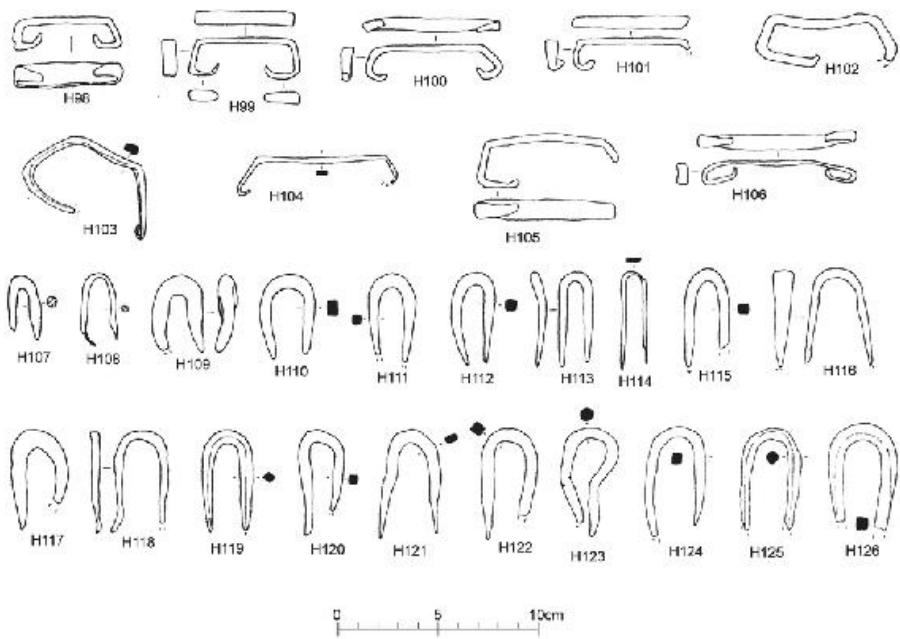



FIGURE 9.6
*Staples*

**H127 STAPLE**
Southampton, Hampshire.
11th to 12th century.
Looped staple. l 62mm, W 34mm.
Harvey 1975b, 276, fig 250.1972.

**H128 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
U-shaped staple, one arm broken. l 64mm, W 31mm.

Excavated by N Macpherson-Grant.

**H129 STAPLE**
Gomeldon, Wiltshire.
Site: 13th–14th century.
U-shaped staple. l 67mm, W 39mm.
Musty and Algar 1986.

**H130 STAPLE**
Chingley Forge, Kent.
Second half 13th to mid 14th century.
U-shaped staple. L 68mm, W 46mm.
Goodall 1975d, 60, fig 27.5.

**H131 STAPLE**
Lochmaben Castle, Dumfries and Galloway. Late 14th century.
U-shaped staple, arms broken. L 63mm, W 31mm.
Macdonald and l aing 1974–75, 148, fig 11.25.

**H132 STAPLE**
Northolt Manor, Greater London.
*c*1300.
U-shaped staple, distorted, one arm broken.
L 68mm, W 35mm.
Excavated by J G Hurst.

**H133 STAPLE**
South Witham, Lincolnshire.
1137–85 to *c*1220.
U-shaped staple. l 65mm, W 30mm.
Goodall 2002, fig 7.3, no. 36.

**H134 STAPLE**
King's Lynn, Norfolk.
*c*1250 to 1300.
U-shaped staple. l 69mm, W 25mm.
Goodall and Carter 1977, 296, fig 134.52.

**H135 STAPLE**
Lismahon, Co. Down.
13th or 14th century.
U-shaped staple, one arm broken. l 74mm, W 29mm.

Waterman 1959a, 162, fig 61.4.

**H136 STAPLE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
U-shaped staple, one arm broken. l 76mm, W 32mm.
Goodall 1979a, 118, SF 11216.

**H137 STAPLE**
Rhuddlan, Clwyd.
Late 13th or early 14th century.
U-shaped staple, arms broken. l 73mm, W 28mm.
Goodall 1994, fig 17.3, no. 37.

**H138 STAPLE**
Dyserth Castle, Clwyd.
Site: 1241–63.
U-shaped staple. l 82mm, W 35mm.
National museum of Wales, Cardiff, 15–248/14.

**H139 STAPLE**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
U-shaped staple. L 78mm, W 39mm.
Goodall 1979a, 118, fig 61.24.

**H140 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
U-shaped staple. l 86mm, W 37mm.
Excavated by N Macpherson-Grant.

**H141 STAPLE**
Brandon Castle, Warwickshire.
1226–1266.
U-shaped staple and ring **H656**. Staple L 93mm. For illustration see **H656** .
Chatwin 1955, 81, fig 11.9.

**H142 STAPLE**
Ospringe, Kent.
*c*1483 to 1550.
U-shaped staple, one arm broken. l 81mm, W 41mm.

Goodall 1979c, 129, fig 20.30.

**H143 STAPLE**
Hampton Wafer, Hereford and Worcester.
Site: 11th to early 14th century.
U-shaped staple, arms broken. L 86mm, W 38mm.
Stanford 1967, 87, fig 7.8.

**H144 STAPLE**
Winchester, Hampshire.
Mid 18th–19th century.
U-shaped staple, one arm broken. l 89mm, W 44mm.
Goodall 1990-10, fig 78.522.

**H145 STAPLE**
Pleshey Castle, e ssex.
Post-1180 to mid 13th/early 14th century.
Complete. l 98mm.
Goodall 1977c, 177, fig 38.27.

**H146 STAPLE**
Brome, Suffolk.
In mid 14th-century collapse.
U-shaped saple, arm broken. L 123mm, W 45mm.
West 1970, 110, fig 12.6.

**H147 STAPLE**
King's l ynn, Norfolk.
Later part of period *c*1150 to 1250.
U-shaped staple, complete arm out-turned.
L 52mm, W 22mm.
Goodall and Carter 1977, 296, fig 134.50.

**H148 STAPLE**
South Witham, Lincolnshire.
Late 13th century to 1308–1313.
U-shaped staple, curved arm tips. l 49mm, W 24mm.
Goodall 2002, fig 7.3, no. 38.

**H149 STAPLE**
Wintringham, Cambridgeshire.
Site: late 12th to early 14th century.

U-shaped staple, broken out-turned arm.
L 54mm, W 30mm.
Goodall 1977a, 257, fig 45.45.

**H150 STAPLE**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
U-shaped staple, one arm broken, other with clenched tip. l 55mm, W 35mm.
Goodall 1979a, 123, fig 65.94.

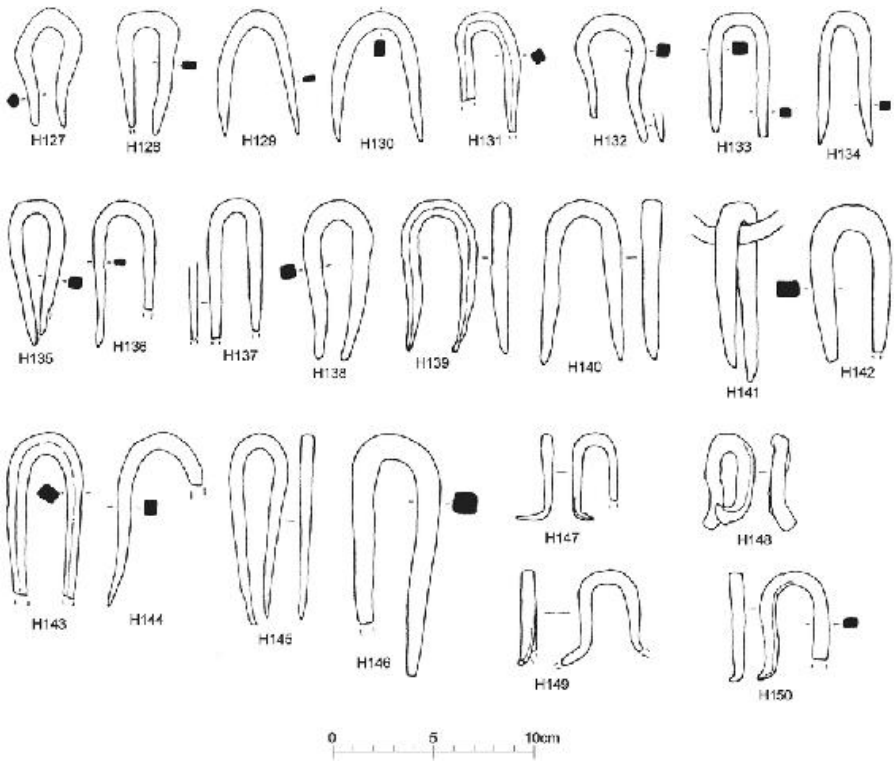



FIGURE 9.7
*Staples*

**H151 STAPLE**
Seacourt, Oxfordshire.
Mid 13th–14th century.
U-shaped staple with clenched tips. L 48mm, W 35mm.
Biddle 1961–62, 177, fig 30.6.

**H152 STAPLE**
Stonar, Kent.

*c*1150 to *c*1225.
U-shaped staple, broken out-turned arms.
L 60mm, W 26mm.
EXcavated by N Macpherson-Grant.

**H153 STAPLE**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
U-shaped staple, out-turned arms. L 100mm, W 28mm.
Goodall 1980a, 513, fig 267.74.

**H154 STAPLE**
Chelmsford Priory, Essex.
From destruction debris deposited by *c*1560 over site founded in mid 13th century, dissolved 1537.
Rectangular staple, long angled arms.
L 150mm, W 48mm.
Drury 1974, 59, fig 9.25.

**H155 STAPLE**
Winchester, Hampshire.
Late 11th–12th century.
Complete looped staple. l 47mm, W 22mm.
Goodall 1990-10, fig 78.523.

**H156 STAPLE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
Looped staple. L 58mm, W 15mm.
Goodall 1975a, 86, fig 40.85.

**H157 STAPLE**
Stonar, Kent.
*c*1225–1275.
Looped staple, one arm broken. L 66mm, W 21mm.
Excavated by N Macpherson-Grant.

**H158 STAPLE**
Knaresborough Castle, North Yorkshire.
Early 15th century.
Looped staple. l 86mm, W 20mm.
Le Patourel 1963–66, fig 8.18 (from rubbish pit).

**H159 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Looped staple. L 84mm, W 21mm.
Excavated by N Macpherson-Grant.

**H160 STAPLE**
Rhuddlan, Clwyd.
14th century,?earlier part, or conceivably 1290–1300.
Looped staple, broken and distorted clenched arms. L 43mm, W 15mm.
Goodall 1994, fig 17.3, no. 40.

**H161 STAPLE**
Winchester, Hampshire.
15th–16th century.
Looped staple with out-turned arms. L 67mm.
Goodall 1990-10, fig 78.525.

**H162 STAPLE**
Staines, Surrey.
1300 to 1500.
Looped staple with broken out-turned arms.
L 66mm, W 22mm.
Excavated by K r Crouch.

**H163 STAPLE**
Rhuddlan, Clwyd.
14th century,?earlier part, or conceivably 1290–1300.
Looped staple, clenched tips, one broken.
L 82mm, W 18mm.
Goodall 1994, fig 17.3, no. 39.

**H164 STAPLE**
Winchester, Hampshire.
Mid 13th century.
Looped staple with clenched, out-turned arms. L 33mm.
Goodall 1990-10, fig 78.524.

**H165 LINK AND STAPLE**
Brandon Castle, Warwickshire.
13th century,?post-1226.
Looped staple with clenched, out-turned arms supporting a link. L 69mm,

W 24mm.
Chatwin 1955, 81, fig 11.11.

**H166 STAPLE**
Hen Domen, Powys.
13th century.
Broken looped staple holding ring **H655**.
L 24mm. For illustration see **H655** .
Barker and Higham 2000.

**H167 STAPLE**
Kilton Castle, Cleveland.
Late 15th century.
Loop staple, arms broken. L 43mm, W 21mm.
Excavated by A Aberg.

**H168 STAPLE**
Winchester, Hampshire.
16th century.
Staple with deep loop and broken arms.
L 41mm.
Goodall 1990-10, fig 78.526.

**H169 STAPLE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Looped staple, arms broken. l 64mm, W 29mm.
Goodall 1979a, 118, fig 61.25.

**H170 STAPLE**
Stonar, Kent.
*c*1275 to 1385.
Broken looped staple retaining ring **H657**.
L 65mm. For illustration see **H657** .
Excavated by N Macpherson-Grant.

**H171 STAPLE**
Burton-in-l onsdale, North Yorkshire.
Lter 13th to mid 14th century.
lLoped staple, arms broken. lL137mm, W 41mm.
moorhouse 1971, 95, fig 3.19.

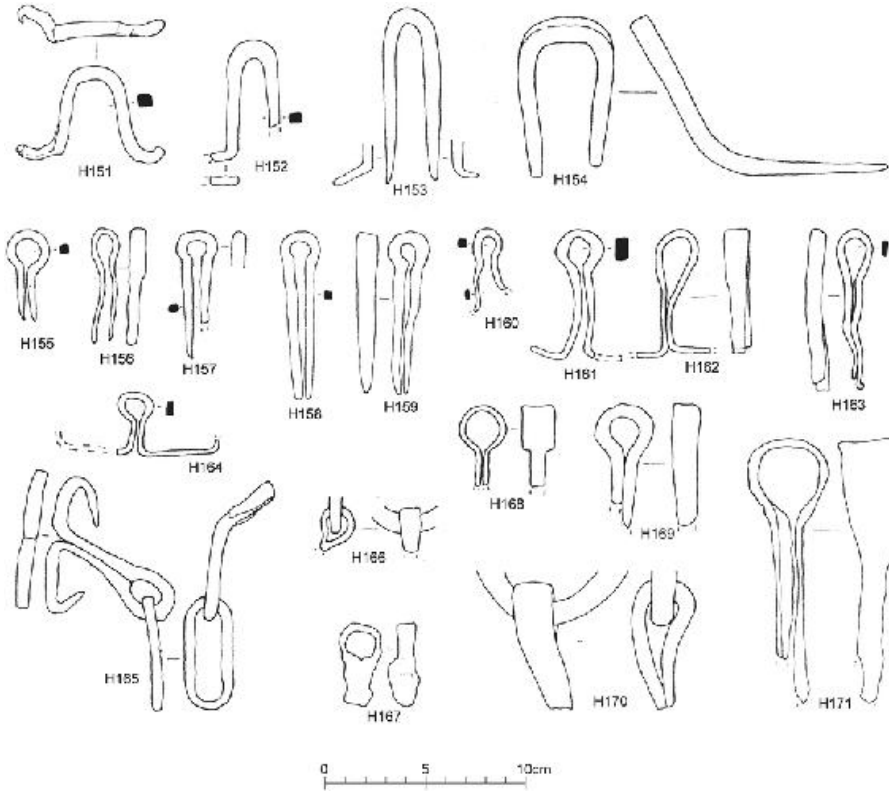



FIGURE 9.8
*Staples*

**H172 WALLHOOK**
Portchester Castle, Hampshire.
Immediately prior to construction of building between 1521 and 1527.
Hook broken. l 53mm.
Hinton 1977, 204, fig 209.62.

**H173 WALLHOOK**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Hook broken, shank tip split. l 56mm.
Goodall 1988, fig 75.31; b orenius and Charlton 1936.

**H174 WALLHOOK** (not illustrated)
Winchester, Hampshire.
15th century.
Shank and hook broken. L 27mm.
Goodall 1990-10, 333, no. 490.

**H175 WALLHOOK**
Winchester, Hampshire.
Late 11th–12th century.
Hook broken. L 54mm.
Goodall 1990-10, 332, no. 483.

**H176 WALLHOOK**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Shank broken. l 65mm.
Goodall 1988, fig 75.32; Borenius and Charlton 1936.

**H177 WALLHOOK** (not illustrated)
Winchester, Hampshire.
Early to mid 13th century.
Hook broken. L 47mm.
Goodall 1990-10, 332, no. 485.

**H178 WALLHOOK** (not illustrated)
Winchester, Hampshire.
1441– 42.
Hook and shank broken. L 38mm.
Goodall 1990-10, 333, no. 489.

**H179 WALLHOOK**
Ospringe, Kent.
*c*1270 to 1483.
Complete. Shank tip curved. L 65mm.
Goodall 1979c, 129, fig 20.34.

**H180 WALLHOOK**
Lyveden, Northamptonshire.
*c*1200–1350.
Hook broken. L 77mm.
Steane and Bryant 1975, 137, fig 51.222.

**H181 WALLHOOK**
Winchester, Hampshire.
13th century.
Complete. L 92mm.
Goodall 1990-10, fig 77.487.

**H182 WALLHOOK**
South Witham, Lincolnshire.
Late 13th century to 1308–1313.
Complete. L 77mm.
Goodall 2002, fig 7.3, no. 39.

**H183 WALLHOOK**
Winchester, Hampshire.
Late 12th–?early 13th century.
Hook and shank broken. L 72mm.
Goodall 1990-10, fig 77.484.

**H184 WALLHOOK** (not illustrated)
Waltham Abbey, Essex.
In clay floor of smithy of late 12th or early 13th to 16th century date.
Shank broken. L 106mm.
Goodall 1973a, 173, fig 12.49.

**H185 WALLHOOK**
Norwich.
15th to 17th century.
Complete. L 130mm.
Hurst and Golson 1953–57, 99, fig 24.7.

**H186 WALLHOOK**
Winchester, Hampshire.
Early 13th–late 14th century.
Hook and shank broken. L 68mm.
Goodall 1990-10, 333, no. 488.

**H187 WALLHOOK**
Winchester, Hampshire.
Late 13th century.
Hook and shank broken. L 76mm.
Goodall 1990-10, fig 77.486.

**H188 WALLHOOK**
Northampton.
Site: early Saxon to 15th century.
Hook and shank broken. 36mm.
Goodall *et al* 1979, 273, fig 119.74.

**H189 WALLHOOK**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Shank broken. L 46mm.
Goodall 1977f, 47, iron fig 2.22.

**H190 WALLHOOK**
Hambleton moat, lincolnshire.
1250 –1400.
Shank distorted. L 112mm.
Butler 1963, 65, fig 14.3.

**H191 WALLHOOK**
Stonar, Kent.
*c*1275 to 1385.
Complete. l 95mm.
Excavated by N Macpherson-Grant.

**H192 WALLHOOK**
Oxford Castle, Oxford.
Late 14th to mid 15th century.
Hook and shank broken. L 84mm.
Goodall 1976c, 298, fig 26.8.

**H193 WALLHOOK**
Winchester, Hampshire.
Mid 12th century.
Hook and shank broken. L 97mm.
Goodall 1990-10, fig 77.482.

**H194 WALLHOOK**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Shank broken. l 46mm.
Goodall 1988, fig 75.33; Borenius and Charlton 1936.

**H195 WALLHOOK** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Hook and shank broken. L 49mm.
Goodall 1990-10, 333, no. 492.

**H196 WALLHOOK** (not illustrated)
Winchester, Hampshire.
Early to?mid 16th century.
Hook and shank broken. L 48mm.
Goodall 1990-10, 333, no. 504.

**H197 WALLHOOK** (not illustrated)
Winchester, Hampshire.
15th–?16th century.
Hook and shank broken. L 65mm.
Goodall 1990-10, 333, no. 501.

**H198 WALLHOOK**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Complete but shank distorted. L 75mm.
Goodall 1975a, 86, fig 40.74.

**H199 WALLHOOK**
Winchester, Hampshire.
15th–16th century.
Complete. L 103mm.
Goodall 1990-10, fig 77.507.

**H200 WALLHOOK**
Kings Langley, Hertfordshire.
*c*1300.
Complete. L 92mm.
Neal 1973, 56, fig XV .62.

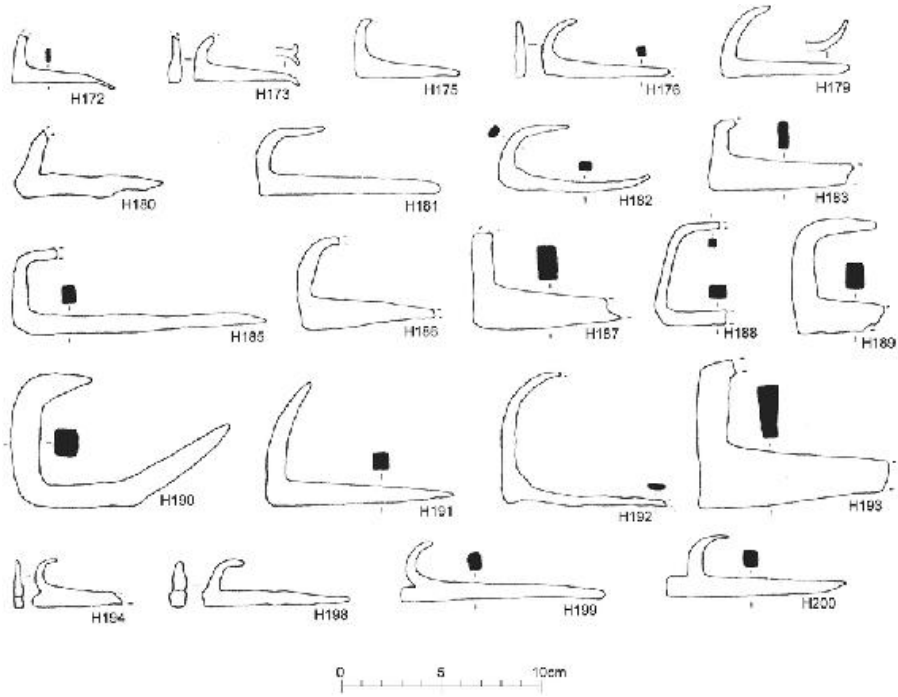



FIGURE 9.9
*Wallhooks*

**H201 WALLHOOK**
Winchester, Hampshire.
15th century.
Complete. L 76mm.
Goodall 1990-10, fig 77.500.

**H202 WALLHOOK** (not illustrated)
Northolt m anor, Greater London.
1350 to 1370.
Hook and shank broken. L 72mm.
Excavated by J G Hurst.

**H203 WALLHOOK** (not illustrated)
Winchester, Hampshire.
Late 15th–early 16th century.
Hook and shank broken. L 66mm.
Goodall 1990-10, 333, no. 503.

**H204 WALLHOOK** (not illustrated)
Manor of the More, Rickmansworth, Hertfordshire.

*c*1426.
Hook and shank broken. L 61mm.
Biddle *et al* 1959, 185, fig 19.42.

**H205 WALLHOOK**
Winchester, Hampshire.
Mid 15th century.
Complete. L 78mm.
Goodall 1990-10, 333, no. 497.

**H206 WALLHOOK** (not illustrated)
Winchester, Hampshire.
Mid 15th century.
Hook and shank broken. L 97mm.
Goodall 1990-10, 333, 499.

**H207 WALLHOOK**
Winchester, Hampshire.
1441–42 to mid 16th century.
Shank broken. L 70mm.
Goodall 1990-10, 333, no. 506.

**H208 WALLHOOK** (not illustrated)
Winchester, Hampshire.
14th–?15th century.
Hook and shank broken. L 74mm.
Goodall 1990-10, 333, no. 496.

**H209 WALLHOOK**
Winchester, Hampshire.
13th–late 14th or?15th century.
Shank broken. L 80mm.
Goodall 1990-10, fig 77.495.

**H210 WALLHOOK**
Stonar, Kent.
*c*1275 to 1385.
Shank broken. L 78mm.
Excavated by N Nacpherson-Grant.

**H211 WALLHOOK** (not illustrated)
Winchester, Hampshire.

Mid 15th century.
Shank broken. L 57mm.
Goodall 1990-10, 333, no. 498.

**H212 WALLHOOK** (not illustrated)
The Hamel, Oxford.
16th century.
Shank and hook broken. L 66mm.
Goodall 1980d.

**H213 WALLHOOK**
Pleshey Castle, e ssex.
Early/mid 16th century to recent times, but including redeposited material.
Shank broken. L 73mm.
Goodall 1977c, 177, fig 39.23.

**H214 WALLHOOK**
Portchester Castle, Hampshire.
Immediately prior to construction of building between 1521 and 1527.
Distorted hook. L 94mm.
Hinton 1977, 201, fig 109.61.

**H215 WALLHOOK** (not illustrated)
Pleshey Castle, e ssex.
Mid 13th/early 14th to early/mid 16th century.
Hook and shank broken. L 73mm.
Goodall 1977c, 177, fig 39.24.

**H216 WALLHOOK**
Winchester, Hampshire.
14th–early 16th century.
Hook and shank broken. L 104mm.
Goodall 1990-10, fig 77.502.

**H217 WALLHOOK** (not illustrated)
Bodiam Castle, e ast Sussex.
*c*1390.
Hook and shank broken. l 109mm.
Excavated by D Martin.

**H218 WALLHOOK**

Pleshey Castle, e ssex.
Mid 13th/early 14th century to recent times.
Shank broken. L 102mm.
Goodall 1977c, 177, fig 38.22.

**H219 WALLHOOK**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Complete. L 119mm.
Goodall 1988, fig 75.34; Borenius and Charlton 1936.

**H220 WALLHOOK**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Complete. L 121mm.
Goodall 1988, fig 75.35; Borenius and Charlton 1936.

**H221 WALLHOOK**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Complete. L 144mm.
Salisbury and South Wiltshire Museum, Salisbury, 8/1932, O.S.C113.

**H222 HOOK**
Duffield Castle, Derbyshire.
Keep built 1177–1190, demolished 1266.
Shank broken. H 61mm, l 142mm.
Manby 1959.

**H223 HOOK**
Clough Castle, Co. Down.
*c*1200 to *c*1225.
Expanded shank tip with depressions.
H 48mm, l 177mm.
Waterman 1954, 140, fig 12.5.

**H224 HOOK**
Portchester Castle, Hampshire.
Later medieval.
Shank with expanded end with shallow depressions. l 192mm.
Hinton 1977, 201, fig 109.42.

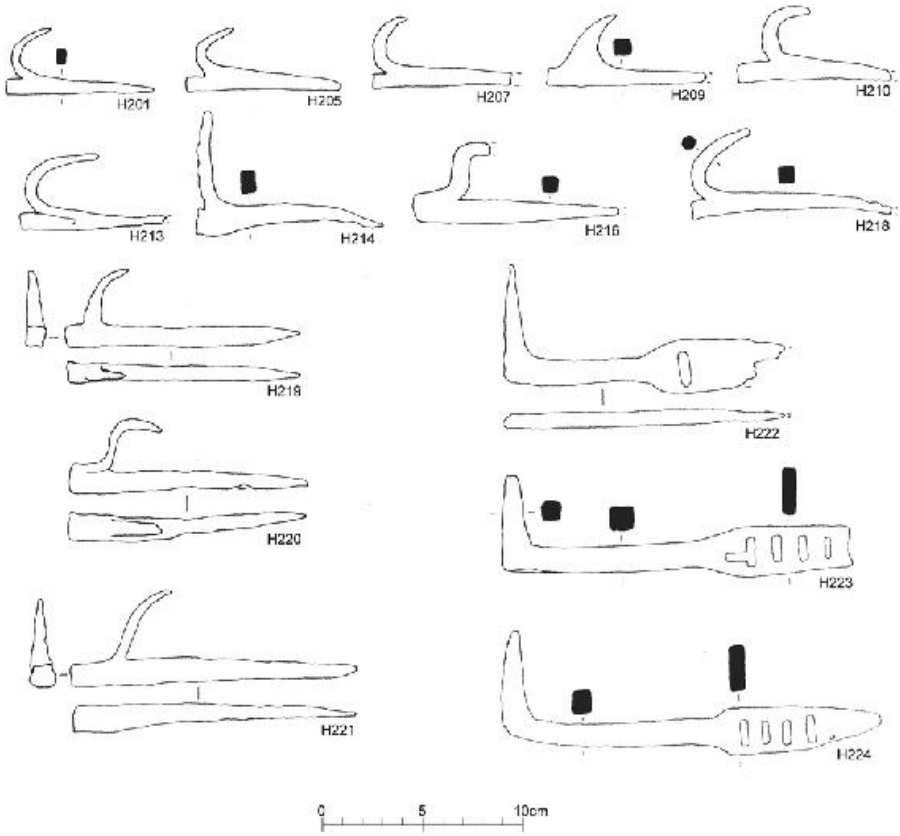



FIGURE 9.10
*Wallhooks and hooks*

**H225 HOOK**
King's Lynn, Norfolk.
Mid 13th–14th century.
Broken looped hook. L 47mm.
Goodall and Carter 1977, 296, fig 134.59.

**H226 HOOK**
Bolton, Fangfoss, Humberside.
Mid 14th century.
Looped hook. L 68mm.
Goodall 1978b, 143, fig 30.32.

**H227 HOOK**
Stonar, Kent.
*c*1275 to 1385.
Head broken. l 98mm.

Excavated by N Macpherson-Grant.

**H228 EYED SPIKE AND RING**
Winchester, Hampshire.
Late 17th to?18th century.
Eyed spike and ring, both broken. L 194mm.
Goodall 1990-10, fig 79.535.

**H229 LOOPED STRAP**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Loop with upturned shank retaining lead caulking. L 66mm.
Goodall 1988, fig 76.51; borenius and Charlton 1936.

**H230 LOOPED STRAP**
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.
Looped strap with clenched tip. l 277mm.
Goodall 1977a, 257, fig 45.59.

**H231 WALL ANCHOR**
Chelmsford Priory, Essex.
Site founded in mid 13th century, dissolved 1537, destroyed by *c*1560.
Head broken. l 113mm.
Drury 1974, 59, fig 4.26.

**H232 WALL ANCHOR**
Tamworth, Staffordshire.
13th century.
Horizontal wood graining on inner face of head. l 81mm.
Excavated by P A Rahtz.

**H233 WALL ANCHOR**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Head broken. L 141mm.
Goodall 1979c, 129, fig 20.35.

**H234 WALL ANCHOR**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Complete. Nail-hole in head. L 145mm.

Goodall 1980a, 514, fig 267.83.

**H235 WALL ANCHOR**
Clarendon Palace, Wiltshire.
Site: *c*1072 to late 15th century.
Head broken. L 158mm.
Goodall 1988, fig 75.30; b orenius and Charlton 1936.

**H236 HOLDFAST**
Red Castle, Thetford, Norfolk.
Site: 11th to early 13th century.
Complete. L 77mm.
Knocker 1966–69, 148, fig 13.4.

**H237 S-HOOK**
South Witham, Lincolnshire.
1137–85 to *c*1220.
S-hook, tip broken. L 35mm.
Goodall 2002, fig 7.3, no. 40.

**H238 S-HOOK**
Wallingstones, Hereford and Worcester.
First half 13th century.
S-hook. L 37mm.
Bridgewater 1970–72, 100, fig 103.8.

**H239 S-HOOK**
Bodiam, e ast Sussex.
Late 13th–14th century.
S-hook. l 43mm.
Excavated by D Martin.

**H240 S-HOOK**
Barry Island, South Glamorgan.
12th to 14th century.
S-hook. L 29mm.
National museum of Wales, Cardiff, 36–202/78. For site see Fox 1936; 1937.

**H241 S-HOOK**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
S-hook, one end broken. L 51mm.

Goodall 1979a, 118, fig 61.30.

**H242 CLENCH BOLT**
Winchester, Hampshire.
11th century.
Complete. l 48mm.
Goodall 1990-10, fig 80.540.

**H243 CLENCH BOLT**
London.
?Late 13th–mid 14th century.
Complete. L 55mm.
Henig 1974, 195, no. 103.

**H244 CLENCH BOLT**
Lydford Castle, Devon.
Mid 13th century.
Typical clench bolt from well cover **H404**. L
75mm.
Goodall 1980b, fig 17.e.

**H245 ROVE**
Winchester, Hampshire.
Early 12th century to *c*1135 –38.
Square rove. L 33mm.
Goodall 1990-10, fig 80.542.

**H246 ROVE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Flat, lozenge-shaped rove with two bevelled edges. l 72mm.
Goodall 1988, fig 76.48; b orenius and Charlton 1936.

**H247 ROVE**
Winchester, Hampshire.
Early to?mid 15th century.
Flat, damaged diamond-shaped rove with hollow sides. L 80mm.
Goodall 1990-10, fig 80.550.

**H248 ROVE**
Goltho manor, lincolnshire.
*c*1000–1100.

Curved, shaped rove. L 63mm.
Goodall 1987, fig 158.88.

**H249 ROVE**
Winchester, Hampshire.
Late 11th century.
Curved, shaped rove with shank fragment.
L 62mm.
Goodall 1990-10, fig 80.548.

**H250 ROVE**
Wintringham, Cambridgeshire.
Site: late 12th to early 14th century.
Rectangular rove with broken side arms and fragment of nail. L 66mm.
Goodall 1977a, 257, fig 45.49.

**H251 ROVES**
Stonar, Kent.
*c*1150–*c*1225.
Strip of two roves. L 48mm.
Excavated by N Macpherson-Grant.

**H252 ROVES**
London.
Late 13th–14th century.
Strip of three roves. L 86mm.
Henig 1974, 195, fig 40.121.

**H253 ROVES**
London.
Late 13th–mid 14th century.
Strip of five roves. L 101mm.
Henig 1974, 195, fig 40.119.

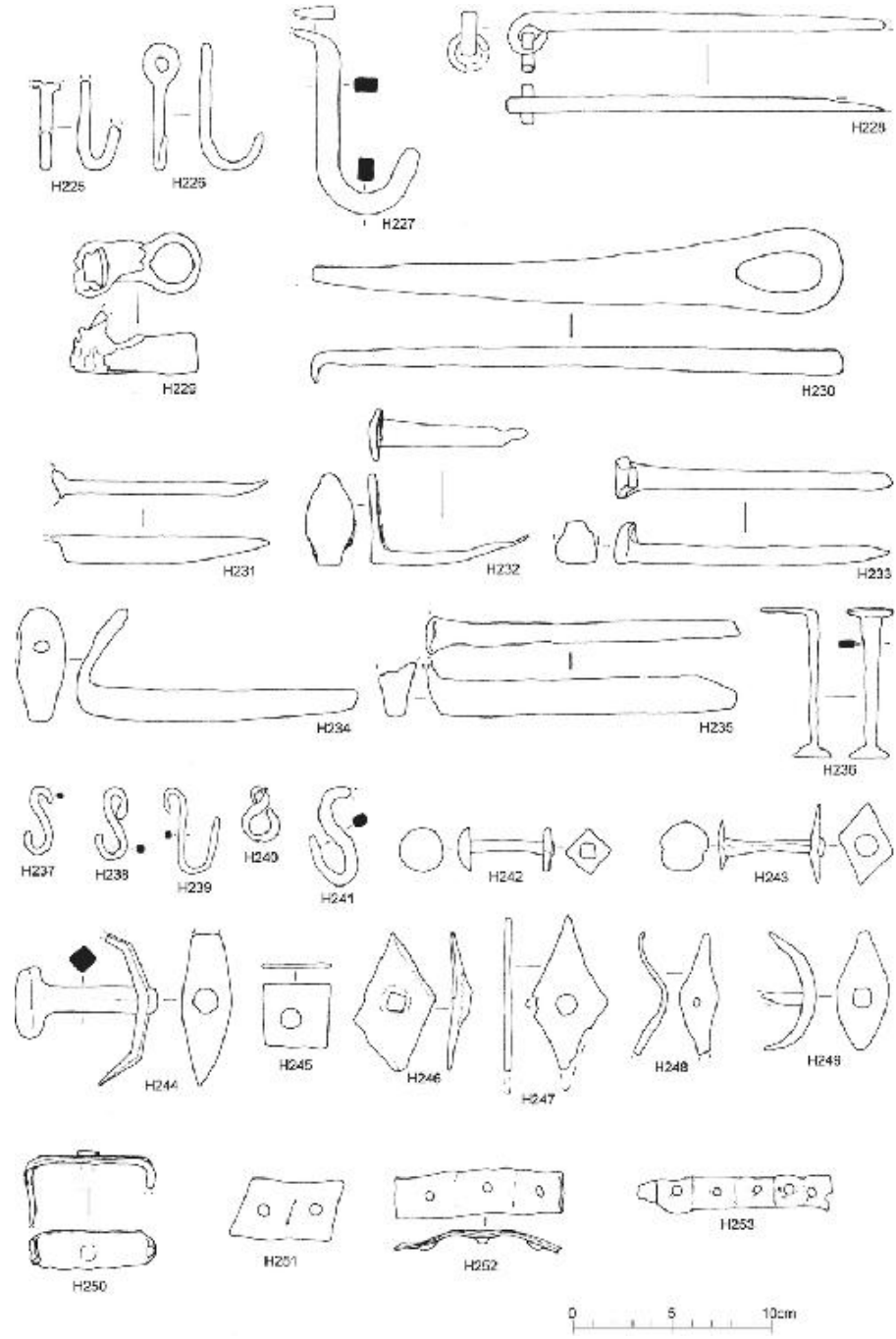



FIGURE 9.11

*Hooks, eyed spike and ring, looped straps, wall anchors, holdfast, S-hooks, clench bolts and roves*

**H254 HINGE PIVOT**

Alsted, Surrey.
*c*1250 to 1350. From gateway in boundary wall.
Complete. L 132mm.
Goodall 1976a, 55–56, fig 34.1.

**H255 HINGE PIVOT**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
Cranked shank, rectangular below ground, circular above. L 169mm.
DAMHB Collection, London, RVA 226(A).

**H256 HINGE PIVOT**
Winchester, Hampshire.
14th–?15th century.
Shank tip clenched. H 23mm, L 35mm.
Goodall 1990-10, fig 83.633.

**H257 HINGE PIVOT**
Wintringham, Cambridgeshire.
Mid 13th century.
Complete. H 23mm, L 39mm.
Goodall 1977a, 257, fig 45.35.

**H258 HINGE PIVOT** (not illustrated)
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. H 32mm, L 41mm.
Glenn 1915.

**H259 HINGE PIVOT** (not illustrated)
Oxford.
Late 12th century to *c*1250.
Complete. H 22mm, L 42mm.
Goodall 1977e, 142, fig 27.32.

**H260 HINGE PIVOT**
Oxford.
Early 14th to mid 15th century.
Complete. H 31mm, L 43mm.
Goodall 1976c, 298, fig 26.7.

**H261 HINGE PIVOT** (not illustrated)

Riplingham, Humberside.
Late 13th to early 15th century.
Complete. H 23mm, L 44mm.
Wacher 1963–66, 654, fig 20.13.

**H262 HINGE PIVOT**
Winchester, Hampshire.
Mid to late 13th century.
Complete. H 30mm, L 48mm.
Goodall 1990-10, fig 83.610.

**H263 HINGE PIVOT** (not illustrated)
Dyserth Castle, Clwyd.
Site: 1241–63.
Shank tip broken. H 36mm, L 48mm.
Glenn 1915.

**H264 HINGE PIVOT** (not illustrated)
Stonar, Kent.
*c*1275–1385. Found with hinge **H430**.
Complete. H 33mm, L 49mm. For illustration see **H430**.
Excavated by N Macpherson-Grant.

**H265 HINGE PIVOT** (not illustrated)
Stonar, Kent.
*c*1275 to 1385.
Complete. H 34mm, l 51mm.
Excavated by N Macpherson-Grant.

**H266 HINGE PIVOT** (not illustrated)
Lyveden, Northamptonshire.
*c*1350 to 1450.
Complete. H 34mm, L 53mm.
Steane and b ryant 1975, 136, fig 51.218.

**H267 HINGE PIVOT**
King's Lynn, Norfolk.
*c*1350 to 1500.
Complete. H 30mm, L 54mm.
Goodall and Carter 1977, 293, fig 133.16.

**H268 HINGE PIVOT** (not illustrated)

Northampton.
End 15th century.
Complete. H 34mm, L 54mm.
Goodall *et al* 1979, 268, fig 117.25.

**H269 HINGE PIVOT** (not illustrated)
Grenstein, Norfolk.
Late 14th to 15th century.
Clenched tip to shank. H 31mm, L 54mm.
Goodall 1980c.

**H270 HINGE PIVOT**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
Complete. H 25mm, L 58mm.
Goodall 1979a, 121, fig 64.92.

**H271 HINGE PIVOT** (not illustrated)
The Hamel, Oxford.
Mid to late 15th century.
Complete. H 38mm, L 58mm.
Goodall 1980d.

**H272 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
Early–mid 10th century.
Complete. H 42mm, L 58mm.
Goodall 1990-10, fig 83.564.

**H273 HINGE PIVOT**
Winchester, Hampshire.
*c*1065–70.
Complete. H 27mm, L 59mm.
Goodall 1990-10, fig 83.578.

**H274 HINGE PIVOT**
Grenstein, Norfolk.
Late 14th to 15th century.
Complete. H 34mm, L 62mm.
Goodall 1980c, fig 78, no. 39.

**H275 HINGE PIVOT** (not illustrated)

Wintringham, Cambridgeshire.
Site: *c*1175 to 1340.
Shank broken. H 29mm, l 59mm.
Goodall 1977a, 257, fig 45.36.

**H276 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
11th century.
Complete. H 40mm, l 62mm.
Goodall 1990-10, 340, no. 581.

**H277 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
18th–19th century.
Shank broken. H 37mm, L 53mm.
Goodall 1990-10, fig 83.648.

**H278 HINGE PIVOT** (not illustrated)
Wintringham, Cambridgeshire.
Site: *c*1175 to 1340.
Complete, shank distorted. H 33mm, L 62mm.
Goodall 1977a, 257.

**H279 HINGE PIVOT**
Winchester, Hampshire.
14th century.
Complete. H 42mm, L 63mm.
Goodall 1990-10, 342, no. 626.

**H280 HINGE PIVOT**
Lyveden, Northamptonshire.
Site: *c*1200 to 1500.
Complete. H 32mm, l 64mm.
Steane and b ryant 1975, 136, fig 51.219.

**H281 HINGE PIVOT** (not illustrated)
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. H 27mm, L 65mm.
Glenn 1915, 63, fig 9.A.

**H282 HINGE PIVOT** (not illustrated)

Winchester, Hampshire.
15th–16th century.
Complete. H 36mm, L 66mm.
Goodall 1990-10, 343, no. 641.

**H283 HINGE PIVOT**
Seacourt, Oxfordshire.
14th century.
Complete. H 37mm, L 67mm.
Biddle 1961–62, 175, fig 29.14, scale 1:4, not 1:3.

**H284 HINGE PIVOT** (not illustrated)
Goltho, lincolnshire.
Site: late Saxon to late 14th or early 15th century.
Complete. H 27mm, L 68mm.
Goodall 1975a, 85, fig 40.69.

**H285 HINGE PIVOT**
Winchester, Hampshire.
12th–13th century.
Complete. H 32mm, L 68mm.
Goodall 1990-10, fig 83.612.

**H286 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
14th century.
Complete. H 32mm, L 68mm.
Goodall 1990-10, fig 83.629.

**H287 HINGE PIVOT**
Stonar, Kent.
*c*1275 to 1385.
Complete. H 37mm, l 69mm.
Excavated by N Macpherson-Grant.

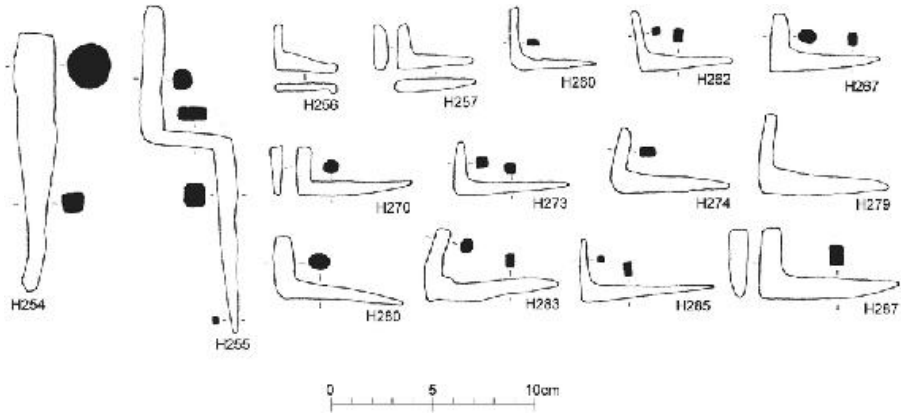



FIGURE 9.12
*Hinge pivots*

**H288 HINGE PIVOT**
Winchester, Hampshire.
15th century.
Complete. H 31mm, L 69mm.
Goodall 1990-10, fig 83.638.

**H289 HINGE PIVOT** (not illustrated)
The Hamel, Oxford.
16th century.
Complete. H 36mm, L 70mm.
Goodall 1980d.

**H290 HINGE PIVOT**
Winchester, Hampshire.
Mid 11th century.
Worn shank. H 46mm, L 71mm.
Goodall 1990-10, fig 83.577.

**H291 HINGE PIVOT**
Dyserth Castle, Clwyd.
Site: 1241–1263.
Complete. H 52mm, L 73mm.
Glenn 1915.

**H292 HINGE PIVOT**
Winchester, Hampshire.
Late 11th–12th century.
Worn shank. H 43mm, L 73mm.

Goodall 1990-10, fig 83.588.

**H293 HINGE PIVOT** (not illustrated)
Lyveden, Northamptonshire.
*c*1200 to 1350.
Complete. H 36mm, L 60mm.
Steane and Bryant 1975, 137, fig 51.220.

**H294 HINGE PIVOT** (not illustrated)
Somerby, Lincolnshire.
15th to 16th century.
Complete. H 35mm, L 75mm.
mynard 1969, 84.

**H295 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
18th–19th century.
Complete. H 44mm, L 75mm.
Goodall 1990-10, 343, no. 649.

**H296 HINGE PIVOT** (not illustrated)
Holworth, Dorset.
Site: 13th to 15th century.
Shank broken. H 45mm, L 76mm.
Rahtz 1959, 146, fig 12.9.

**H297 HINGE PIVOT**
Beckery Chapel, Glastonbury, Somerset.
Second half 13th century to Dissolution.
Lead caulking on shank, guide arm?broken.
H 34mm, L 77mm.
Rahtz and Hirst 1974, 61, fig 22.5.

**H298 HINGE PIVOT** (not illustrated)
London.
?Late 13th to mid 14th century.
Complete. H 36mm, L 77mm.
Henig 1974, 195, fig 39.105.

**H299 HINGE PIVOT**
Northampton.
12th to 13th century.

Complete. H 49mm, L 77mm.
Goodall 1979b, 71, fig 17.10.

**H300 HINGE PIVOT**
Winchester, Hampshire.
Mid–?late 13th century.
Complete. H 43mm, L 78mm.
Goodall 1990-10, fig 83.603.

**H301 HINGE PIVOT**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Complete, shank worn. H 32mm, L 78mm.
Goodall 1980a, 513, fig 267.67.

**H302 HINGE PIVOT**
Glottenham, East Sussex.
Early 14th century.
Complete. H 44mm, L 78mm.
Excavated by D Martin.

**H303 HINGE PIVOT** (not illustrated)
Northampton.
15th century from *c*1410 –1420.
Complete. H 45mm, l 78mm.
Goodall *et al* 1979, 268, fig 117.30, incorrectly numbered 27 in text.

**H304 HINGE PIVOT** (not illustrated)
Wharram Percy, North Yorkshire.
Early 15th century.
Complete. H 38mm, L 80mm.
Goodall 1979a, 118, SF 11512.

**H305 HINGE PIVOT**
Oxford.
Second half 11th century.
Shank tip broken. H 52mm, L 77mm.
Goodall 1977e, 142, fig 27.34.

**H306 HINGE PIVOT**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.

Shank tip broken. H 54mm, L 79mm.
Excavated by Mrs M Gray.

**H307 HINGE PIVOT**
Southampton, Hampshire.
1200–1250.
Shank broken. H 59mm, L 79mm.
Harvey 1975b, 277, fig 250.1989.

**H308 HINGE PIVOT**
Winchester, Hampshire.
Late 13th–early 14th century.
Complete. H 43mm, L 80mm.
Goodall 1990-10, 342, no. 623.

**H309 HINGE PIVOT**
Old Sarum, Wiltshire.
12th century.
Complete. H 47mm, L 81mm.
Musty 1958–60, 191, fig 6.

**H310 HINGE PIVOT**
Seacourt, Oxfordshire.
14th century.
Complete. H 33mm, L 82mm.
Biddle 1961–62, 175, fig 29.13, scale 1:4, not 1:3.

**H311 HINGE PIVOT** (not illustrated)
Goltho, lincolnshire.
Site: late Saxon to late 14th or early 15th century
Shank tip broken. H 36mm, L 81mm
Goodall 1975a, 85, fig 40.70

**H312 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
Mid 13th century.
Complete. H 40mm, W 82mm.
Goodall 1990-10, 342, no. 602.

**H313 HINGE PIVOT** (not illustrated)
Wharram Percy, North Yorkshire.
Early 15th century.

Complete. H 43mm, L 81mm.
Goodall 1979a, 118, fig 60.14.

**H314 HINGE PIVOT** (not illustrated)
The Hamel, Oxford.
Late 15th century.
Complete. H 43mm, L 82mm.
Goodall 1980d.

**H315 HINGE PIVOT**
Goltho, lincolnshire.
14th century, occupied until not long of middle of century.
Clenched shank tip. H 39mm, L 84mm.
Goodall 1975a, 85, fig 40.71.

**H316 HINGE PIVOT**
Stonar, Kent.
*c*1275 to 1385.
Complete. H 37mm, L 86mm.
Excavated by N Macpherson-Grant.

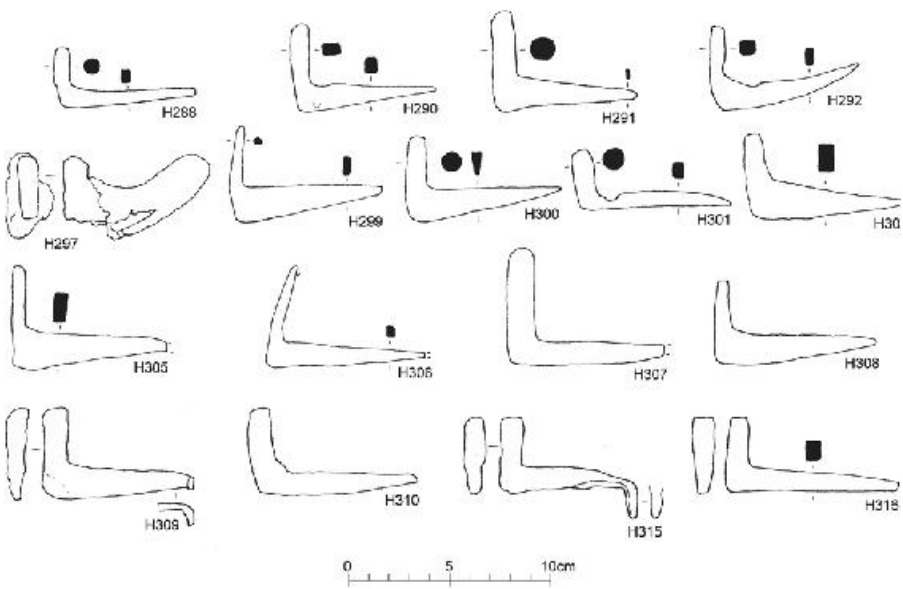



FIGURE 9.13
*Hinge pivots*

**H317 HINGE PIVOT** (not illustrated)
North Elmham Park, Norfolk.

*c*1150 to *c*1600.
Complete. H 36mm, L 88mm.
Goodall 1980a, 513, fig 267.68.

**H318 HINGE PIVOT**
Northampton.
Medieval.
Complete. H 39mm, L 88mm.
Goodall *et al* 1979, 268, fig 117.27, incorrectly numbered 30 in text.

**H319 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
14th century.
Complete. H 40mm, L 88mm.
Goodall 1990-10, 343, no. 632.

**H320 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
*c*1110.
Complete. H 49mm, L 89mm.
Goodall 1990-10, fig 83.583.

**H321 HINGE PIVOT** (not illustrated)
Goltho, lincolnshire.
Site: late Saxon to late 14th or early 15th century.
Shank distorted. H 48mm, L 93mm.
Goodall 1975a, 85, fig 40.72.

**H322 HINGE PIVOT** (not illustrated)
Water Newton, Cambridgeshire.
medieval, pre-13th century.
Complete. H 38mm, L 95mm.
Green 1962–63, 78, fig 4.4.

**H323 HINGE PIVOT**
Barrow Mead, Somerset.
13th to 14th century.
Shank worn. H 42mm, L 93mm.
Goodall 1976b, 35, fig 11.19.

**H324 HINGE PIVOT**
Stonar, Kent.

*c*1275–1385. Found with hinge pivot **H327** and hinge **H421**.
Complete. H 51mm, L 90mm.
Excavated by N Macpherson-Grant.

**H325 HINGE PIVOT**
Somerby, Lincolnshire.
Probably derived from 15th to mid 16th-century occupation.
Complete. H 44mm, L 96mm.
Mynard 1969, 84, fig 13.IW77.

**H326 HINGE PIVOT**
Oxford.
*c*1400 to *c*1550.
Complete. H 47mm, L 96mm.
Goodall 1977e, 142, fig 27.35.

**H327 HINGE PIVOT**
Stonar, Kent.
*c*1275–1385. Found with hinge pivot **H324** and hinge **H421**.
Complete. H 34mm, L 98mm.
Excavated by N Macpherson-Grant.

**H328 HINGE PIVOT** (not illustrated)
Patchway Field, Stanmer Park, East Sussex.
13th century.
Shank tip broken. H 43mm, L 93mm.
Excavated by W C l Gorton.

**H329 HINGE PIVOT** (not illustrated)
Gomeldon, Wiltshire.
Second half 12th century.
Shank broken. H 45mm, l 92mm.
Musty and Algar 1986.

**H330 HINGE PIVOT**
Oxford.
Third quarter 12th century.
Complete. H 59mm, l 98mm.
Goodall 1977e, 142, fig 27.36.

**H331 HINGE PIVOT** (not illustrated)
Goltho Manor, lincolnshire.

*c*110 0 –1150.
Shank tip broken. H 47mm, L 97mm.
Goodall 1987, fig 158.89.

**H332 HINGE PIVOT**
Wroughton Copse, Fyfield Down, Wiltshire.
12th to 13th century.
Shank broken. H 42mm, L 93mm.
Excavated by P J Fowler.

**H333 HINGE PIVOT**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Shank tip broken. H 41mm, l 100mm.
Goodall 1988, fig 76.52; borenius and Charlton 1936.

**H334 HINGE PIVOT**
Winchester, Hampshire.
Mid–late 13th century.
Complete. H 64mm, L 95mm.
Goodall 1990-10, fig 83.608.

**H335 HINGE PIVOT**
Clough Castle, Co. Down.
*c*1250. One of identical pair in same context as two strap hinges, hasp and barrel padlock, all perhaps from same door.
Shank worn, tip clenched. H 50mm, L 100mm.
Waterman 1954, 140, fig 12.4

**H336 HINGE PIVOT** (not illustrated)
Clough Castle, Co. Down.
*c*1250. One of identical pair in same context as two strap hinges, hasp and barrel padlock, all perhaps from same door.
Shank worn, tip clenched. H 50mm, L 100mm (by comparison with **H333** ).
Waterman 1954, 138.

**H337 HINGE PIVOT**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Complete. H 45mm, L 102mm.
Goodall 1979c, 132, fig 20.41.

**H338 HINGE PIVOT**
Wintringham, Cambridgeshire.
Around early 14th century.
Clenched shank tip broken. H 54mm, L 101mm.
Goodall 1977a, 257.

**H339 HINGE PIVOT**
Waltham Abbey, Essex.
1500–70.
Complete. H 47mm, L 103mm.
Goodall 1978d, 158, fig 21.6.

**H340 HINGE PIVOT** (not illustrated)
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Complete. H 44mm, l 98mm.
mynard 1969, 84, fig 13.IW78.

**H341 HINGE PIVOT** (not illustrated)
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275–1300. Found attached to hinge **H417**.
Complete. H 68mm, l 100mm. For illustration see **H417**.
Goodall 1977a, 257, fig 44.30, scale 1:3, not 1:4.

**H342 HINGE PIVOT**
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275 to 1300. Found with hinge **H418**.
Hinge identical to **H417**; hinge pivot shank broken. Hinge l 444mm, hinge pivot H 59mm, l 101mm.
Goodall 1977a, 257.

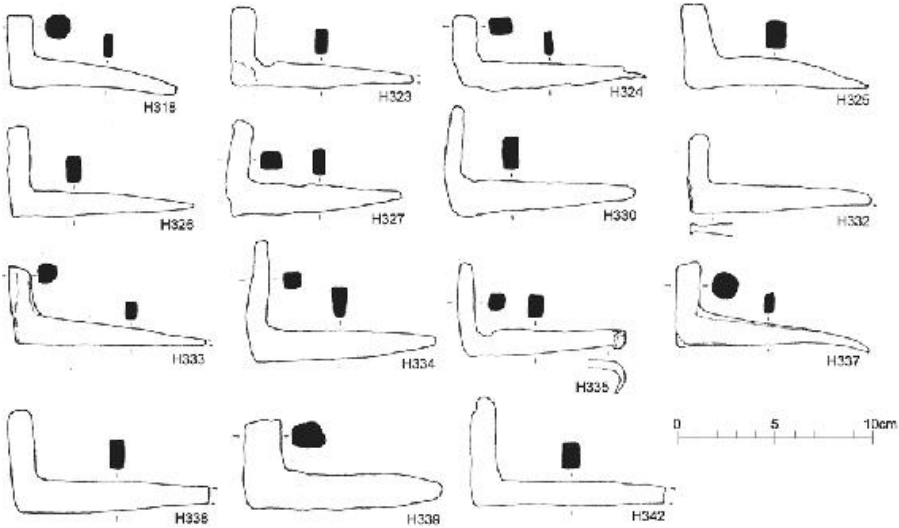



FIGURE 9.14
*Hinge pivots*

**H343 HINGE PIVOT**
Wintringham, Cambridgeshire.
Early 14th century.
Worn shank, clenched tip broken. H 67mm, L 93mm.
Goodall 1977a, 257, fig 45.41.

**H344 HINGE PIVOT**
Winchester, Hampshire.
Early 13th century.
Distorted pivot, shank broken. H 65mm, L 83mm.
Goodall 1990-10, fig 83.593.

**H345 HINGE PIVOT**
Northampton.
Early 15th century from *c*1410 –20.
Complete. H 52mm, l 105mm.
Goodall *et al* 1979, 268, fig 117.24.

**H346 HINGE PIVOT**
Brandon Castle, Warwickshire.
1226–66.
Complete. H 60mm, L 107mm.
Chatwin 1955, 81, fig 11.21.

**H347 HINGE PIVOT**

Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Complete, shank set in lead culking. H 39mm, L 112mm overall.
Goodall 1988, fig 76.58; Borenius and Charlton 1936.

**H348 HINGE PIVOT** (not illustrated)
Wintringham, Cambridgeshire.
Early 14th century.
Shank worn, tip broken. H 53mm, L 112mm.
Goodall 1977a, 257, fig 45.39.

**H349 HINGE PIVOT**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Shank clenched. H 52mm, L 113mm.
Goodall 1980a, 513, fig 267.69.

**H350 HINGE PIVOT**
Stonar, Kent.
*c*1275 to 1385.
Complete. H 50mm, L 119mm.
Excavated by N Macpherson-Grant.

**H351 HINGE PIVOT** (not illustrated)
Stonar, Kent.
*c*1275 to 1385.
Broken clenched tip to shank. H 59mm, L 119mm.
Excavated by N Macpherson-Grant.

**H352 HINGE PIVOT**
Winchester, Hampshire.
14th century.
Worn, broken shank. H 54mm, L 85mm.
Goodall 1990-10, fig 83.628.

**H353 HINGE PIVOT**
Oxford.
Early 14th to mid 15th century.
Worn, broken shank. H 55mm, L 118mm.
Goodall 1976c, 298, fig 26.6.

**H354 HINGE PIVOT** (not illustrated)

Wintringham, Cambridgeshire.
Site: *c*1175 to 1340.
Shank tip broken. H 57mm, L 119mm.
Goodall 1977a, 257.

**H355 HINGE PIVOT** (not illustrated)
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275– 1300. Found attached to hinge **H412**.
Complete. H 57mm, L 128mm. For illustration see **H412**.
Goodall 1977a, 257, fig 44.31, scale 1:3, not 1:4.

**H356 HINGE PIVOT** (not illustrated)
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Complete. H 47mm, L 129mm.
Goodall 1988, fig 76; Borenius and Charlton 1936.

**H357 HINGE PIVOT** (not illustrated)
Wintringham, Cambridgeshire.
Site: *c*1175 to 1340.
Complete. H 45mm, L 130mm.
Goodall 1977a, 257.

**H358 HINGE PIVOT** (not illustrated)
Goltho, l incolnshire.
Site: late Saxon to late 14th or early 15th century.
Shank worn. H 54mm, L 130mm.
Goodall 1975a, 85, fig 40.73.

**H359 HINGE PIVOT** (not illustrated)
Kings l angley, Hertfordshire.
In window probably inserted in cellar in 1388. Single surviving pivot of four set in rebates in window reveal to carry shutters on hinges.
H 60mm, L 130mm.
Neal 1973, 48, fig IX.10.

**H360 HINGE PIVOT**
Goltho m anor, l incolnshire.
*c*110 0 –1125.
Shank tip clenched. H 47mm, L 135mm.
Goodall 1987, fig 158.90.

**H361 HINGE PIVOT**
Wintringham, Cambridgeshire.
Around early 14th century.
Worn shank. H 59mm, L 135mm.
Goodall 1977a, 257, fig 45.40.

**H362 HINGE PIVOT**
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. H 66mm, L 142mm.
Glenn 1915.

**H363 HINGE PIVOT**
Kirkcudbright Castle, Dumfries and Galloway.
Site: *c*1288–1308.
Shank broken. H 61mm, L 135mm.
Dunning *et al* 1957–58, 138, fig 7.2.

**H364 HINGE PIVOT**
Wintringham, Cambridgeshire.
Early 14th century.
Shank tip broken. H 68mm, L 144mm.
Goodall 1977a, 257.

**H365 HINGE PIVOT**
Wintringham, Cambridgeshire.
Site: *c*1175 to 1340.
Clenched tip to shank broken. H 60mm,
L 146mm.
Goodall 1977a, 257, fig 45.42.

**H366 HINGE PIVOT**
North Elmham Park, Norfolk.
*c*1150 to *c*1600.
Complete. H 44mm, L 160mm.
Goodall 1980a, 513, fig 267.70.

**H367 HINGE PIVOT** (not illustrated)
Stonar, Kent.
*c*1275–1385. Found attached to hinge **H435**.
Complete. H 33mm, l 49mm. For illustration see **H435**.
Excavated by N Macpherson-Grant.

**H368 HINGE PIVOT**
West Hartburn, Durham.
medieval to later 16th century. One of pair of hinge pivots and hinges from burnt door. See **H369** and **H391–392**.
Shank broken. H 39mm, L 79mm.
Still and Pallister 1967, 146, fig 4.1.

**H369 HINGE PIVOT**
West Hartburn, Durham.
Site medieval to later 16th century. One of pair of hinge pivots and hinges from burnt door.
See **H368** and **H391–392**.
Shank broken. H 45mm L 66mm.
Still and Pallister 1967, 146, fig 4.1.

**H370 HINGE PIVOT**
Alsted, Surrey.
*c*1270 to 1350.
Complete. H 28mm, L 75mm.
Goodall 1976a, 56, fig 34.2.

**H371 HINGE PIVOT**
Alsted, Surrey.
*c*1270 to 1350.
Guide arm damaged. H 36mm, L 89mm.
Goodall 1976a, 56, fig 34.3.

**H372 HINGE PIVOT**
Penhallam, Cornwall.
*c*1200 to mid 14th century.
Down-turned end to shank which retains some lead caulking. H 37mm, L 94mm.
Goodall 1974c, 139, fig 46.2.

**H373 HINGE PIVOT**
Penhallam, Cornwall.
*c*1200 to mid 14th century.
Down-turned end to shank which retains some lead caulking. H 44mm, L 95mm.
Goodall 1974c, 139, fig 46.3.

**H374 HINGE PIVOT**

Penhallam, Cornwall.
*c*1200 to mid 14th century.
Down-turned end to shank which retains some lead caulking. H 56mm, L 97mm.
Goodall 1974c, 139, fig 46.4.

**H375 HINGE PIVOT**
Winchester, Hampshire.
*c*1222.
Shank with down-turned end retains lead caulking. H 42mm, L 98mm.
Goodall 1990-10, fig 82.559.

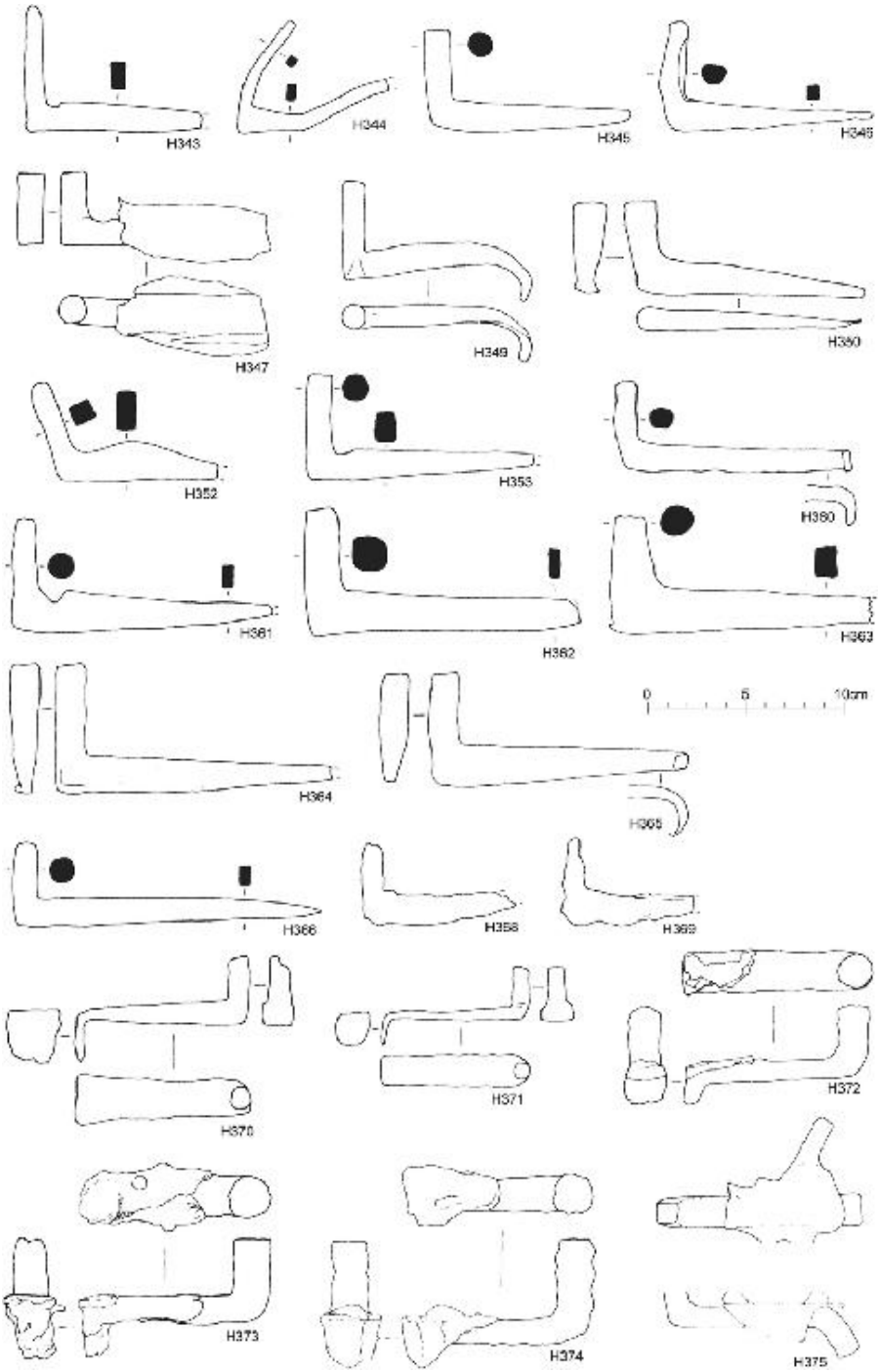



FIGURE 9.15
*Hinge pivots*

**H376 HINGE PIVOT**

Northampton.
*c*1250 to end 14th century.
Down-turned end to shank. H 50mm, L 115m m.
Goodall *et al* 1979, 268, fig 117.23.

**H377 HINGE PIVOT**
Winchester, Hampshire.
14th century.
Shank broken. H 24mm, L 56mm.
Goodall 1990-10, fig 82.560.

**H378 HINGE PIVOT**
Somerby, Lincolnshire.
Derived from 11th- to 15th-century occupation.
Shank broken. H 40mm, L 90mm.
mynard 1969, 84.

**H379 HINGE PIVOT**
Castell-y-b ere, Gwynedd.
Site: *c*1221–95.
Shank with down-turned end set in lead, guide arm lost. L 111mm.
Butler 1974, 98, fig 9.28.

**H380 HINGE PIVOT**
Winchester, Hampshire.
Mid 12th century.
Shank end bifurcated. H 46mm, L 95mm.
Goodall 1990-10, fig 82.558.

**H381 HINGE PIVOT** (not illustrated)
Bordesley Abbey, Hereford and Worcester.
Site: *c*1140–1538 and later.
Split shank secured in lead caulking.
L 180mm.
Wright 1976, 195, fig 36.14.

**H382 HINGE PIVOT**
Hen b las, Clwyd.
In late 12th-century chapel door jamb.
Broken shank secured in rebate in stone by lead caulking. l 118mm.
Leach 1960, 13–14, fig 10.

**H383 HINGE PIVOT** (not illustrated)
Winchester, Hampshire.
Mid 16th century.
Substantial, broken shank with bifurcated end set in lead. l 67mm, W 80mm.
Goodall 1990-10, 338, no. 563.

**H384 HINGE PIVOT**
Winchester, Hampshire.
15th century.
Shank broken. H 127mm, l 88mm.
Goodall 1990-10, fig 82.562.

**H385 HINGE**
Somerby, Lincolnshire.
15th to mid 16th century.
Looped eye, distorted and broken strap.
L 468mm.
mynard 1969, 84, fig 13.IW79.

**H386 HINGE**
Hambleton moat, lincolnshire.
Site: 1250–1400.
Looped eye, strap with bifurcated terminal.
L 370mm.
Butler 1963, 67, fig 14.11.

**H387 HINGE**
Weoley Castle, b irmingham, West m idlands.
*c*1200–1380.
Looped eye, strap end upturned. L 369mm.
Taylor 1974. For site see Oswald 1962.

**H388 HINGE** (not illustrated)
Weoley Castle, Birmingham, West Midlands.
*c*1200–1380.
Looped eye, broken strap. L 336mm, W 32mm.
Taylor 1974. For site see Oswald 1962.

**H389 HINGE** (not illustrated)
Weoley Castle, Birmingham, West Midlands.
*c*1200–1380.

Looped eye, broken strap. L 274mm, W 43mm.
Taylor 1974. For site see Oswald 1962.

**H390 HINGE** (not illustrated)
Winchester, Hampshire.
14th century.
Looped eye, broken strap. L 169mm, W 25mm.
Goodall 1990-10, fig 84.655.

**H391 HINGE**
West Hartburn, Durham.
Site medieval to later 16th century. One of a pair of hinges and hinge pivots from burnt door. See **H368–369** and **H392**.
Looped eye, broken strap. L 198mm.
Still and Pallister 1967, 141, 146, fig 4.1

**H392 HINGE** (not illustrated)
West Hartburn, Durham.
Site medieval to later 16th century. One of a pair of hinges and hinge pivots from burnt door. See **H368–369** and **H391**.
Looped eye, broken strap. L 165mm, W unknown.
Still and Pallister 1967, 141, 146, fig 4.1

**H393 HINGE**
Griff (Sudeley Castle), Warwickshire.
Site: 13th to 14th century.
Looped eye, broken and distorted strap.
L 160mm.
West 1968, 87, fig 4.7.

**H394 HINGE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Looped eye, bifurcated terminal. L 161mm.
Goodall 1975a, 86, fig 40.75.

**H395 HINGE** (not illustrated)
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Looped eye, strap broken. L 44mm, W 41mm.
Mynard 1969, 84, fig 13.IW80.

**H396 HINGE** (not illustrated)
Winchester, Hampshire.
*c*1135 –38.
Looped eye, broken strap. L 37mm, W 30mm.
Goodall 1990-18, fig 303.3454.

**H397 HINGE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Looped eye, broken strap. L 92mm.
Goodall 1975a, 86, fig 40.76.

**H398 HINGE**
Goltho, lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
Looped eye, broken strap. L 52mm, W 18mm.
Goodall 1975a, 86, fig 40.77.

**H399 HINGE**
Hen Caerwys, Clwyd.
*c*1450–1520.
Looped eye, broken strap. L 79mm.
Excavated by G B L each.

**H400 HINGE**
Cambokeels, Durham.
Site: from last quarter 14th century into 16th century.
Looped eye, broken strap. L 79mm.
Hildyard 1949, 199, fig 4.7.

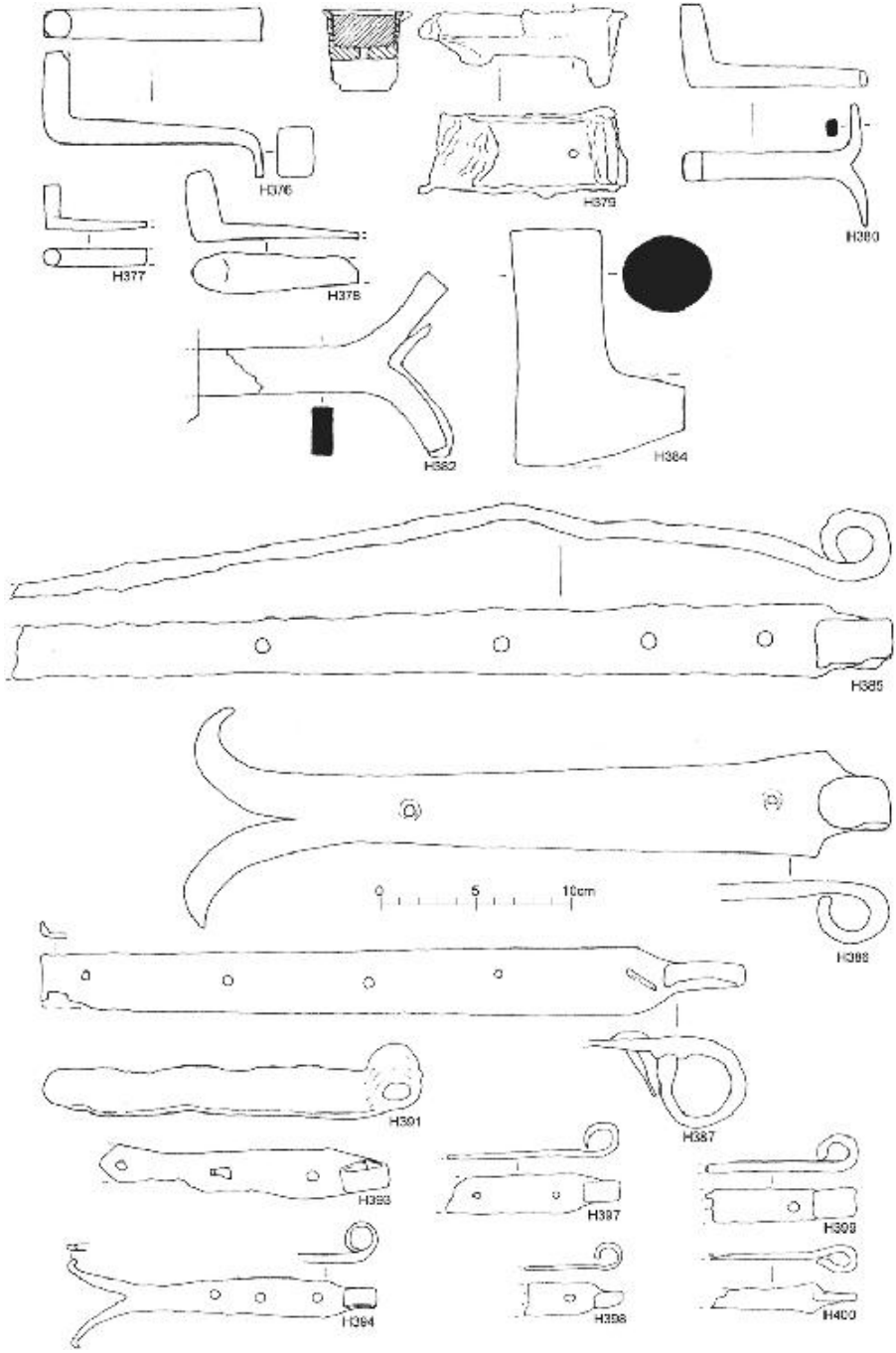



FIGURE 9.16
*Hinge pivots and hinges*

**H401 HINGE**
Griff (Sudeley Castle), Warwickshire.

Site: 13th to 14th century.
Looped eye, T-shaped strap. L 98mm.
West 1968, 87, fig 4.8.

**H402 HINGE**
Alsted, Surrey.
*c*1270–1350.
C-shaped hinge, both ends broken, with looped eye. W 131mm.
Goodall 1976a, 56, fig 34.7.

**H403 HINGE**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
C-shaped hinge with shaped terminals and centrally set looped eye. W 214mm.
DAMHB Collection, London. RVA 305.

**H404 WELL COVER** (Figure 9.17)
Lydford Castle, Devon.
Mid 13th century.
Well cover reconstructed from fragments of ironwork in well. Two strap hinges with scrolled terminals and looped eyes nailed to battens and ledges. Four other ledges held to battens by clench bolts with shaped roves (**H244**). Curved hasp **H624** stapled close to edge. Hinge L 810mm
Goodall 1980b, fig 17.

**H405 HINGE**
Winchester, Hampshire.
?Mid 14th century.
Looped eye, broken strap. L 440mm.
Goodall 1990-10, fig 84.653.

**H406 HINGE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Looped eye, strap with simply shaped terminal. L 215mm.
Goodall 1988, fig 77.55; b orenius and
Charlton 1936.

**H407 HINGE** (not illustrated)
Ospringe, Kent.
*c*1483–1550.

Looped eye, broken strap. L 60mm.
Goodall 1979c, 132, fig 20.47.

**H408 HINGE** (not illustrated)
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Looped eye, broken strap. L 35mm, W 28mm.
Goodall 1988, fig 77; Borenius and Charlton 1936.

**H409 HINGE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Looped eye, broken strap. L 61mm.
O'Neil 1944–45, 42, pl X.32.

**H410 HINGE**
Winchester, Hampshire.
?Mid 14th century.
Looped eye, broken strap. L 91mm.
Goodall 1990-10, fig 84.654.

**H411 HINGE** (not illustrated)
Eynsford Castle, Kent.
*c*1250. One of a pair of hinges.
Nailed U-shaped eye, bifurcated terminal.
L 574mm.
Rigold 1971, 144, fig 9.1

**H412/H355 HINGE AND HINGE PIVOT**
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275 to 1300.
Hinge with nailed U-shaped eye and strap, both broken. Hinge pivot complete. Hinge L 538mm, hinge pivot H 57mm, l 128mm. Goodall 1977a, 257, fig 44.31, scale 1:5, not 1:4.

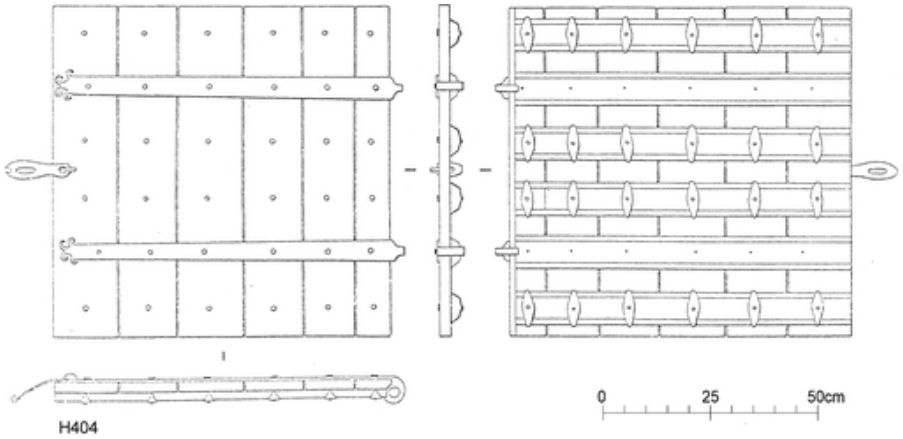



FIGURE 9.17
*Well cover*

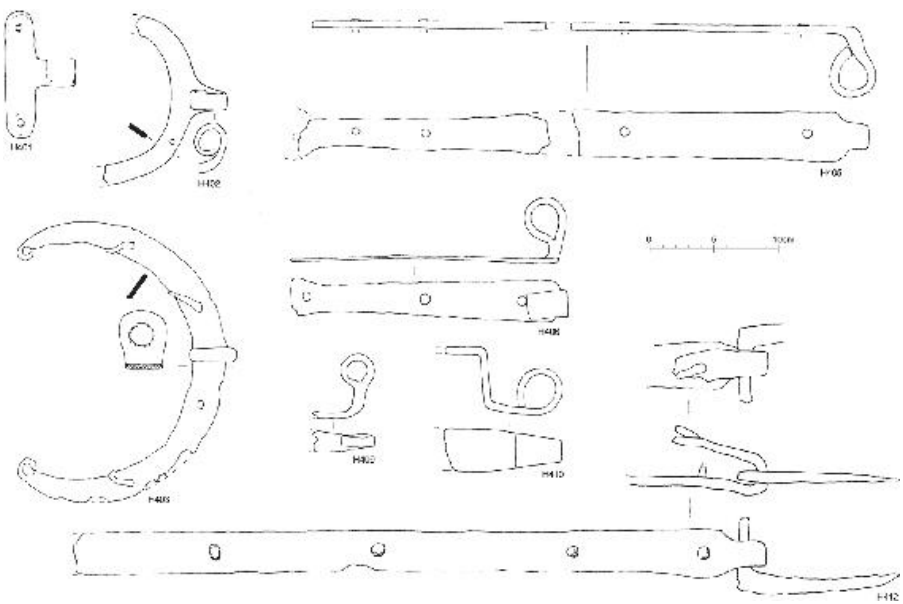


FIGURE 9.18
*Hinges*

**H413 HINGE**
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275 to 1300.
Nailed U-shaped eye, strap broken. L 205mm.
Goodall 1977a, 257, fig 45.32.

**H414 HINGE**
Alsted, Surrey.

*c*1270 –1400.
Nailed U-shaped eye, broken strap.
L 496mm.
Goodall 1976a, 56, fig 35.34.

**H415 HINGE**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Nailed U-shaped eye with shaped rear terminal, strap broke. L 302mm.
Shortt 1972, 120, fig 5.31.

**H416 HINGE** (not illustrated)
Oxford.
Early 14th to mid 15th century.
Nailed U-shaped eye, rear terminal and strap broken. L 128mm, W 38mm.
Goodall 1976c, 298, fig 26.5.

**H417/H341 HINGE AND HINGE PIVOT**
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275 to 1300. One of a pair.
Hinge with nailed U-shaped eye and shaped terminal; hinge pivot shank broken. Hinge L 444mm, hinge pivot H 68mm, L 10mm.
Goodall 1977a, 257, fig 44.30, scale 1:5, not 1:4.

**H418/H342 HINGE AND HINGE PIVOT**
(not illustrated)
Wintringham, Cambridgeshire.
Demolition levels of kitchen in use *c*1275 to 1300.
Hinge identical to **H417**; hinge pivot shank broken. Hinge l 444mm, hinge pivot **H342**, H 59mm, L 101mm.
Goodall 1977a, 257.

**H419 HINGE**
Clough Castle, Co. Down.
*c*1250. One of a pair of hinges from same context as two hinge pivots, hasp and barrel padlock, all perhaps from same door.
Nailed U-shaped eye, rear terminal and strap with bifurcated terminal both broken.
L 374mm
Waterman 1954, 138, fig 12.1

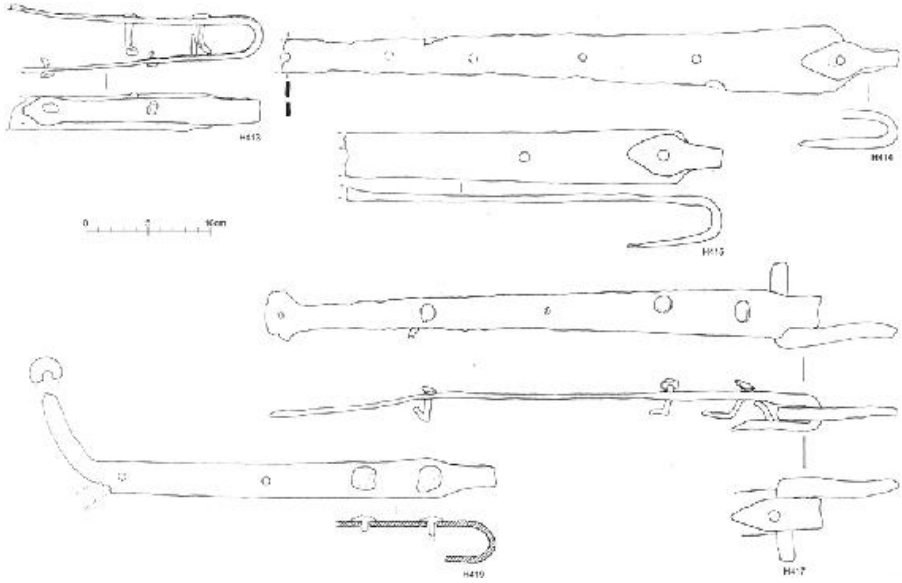


FIGURE 9.19
*Hinges*

**H420 HINGE**
Clough Castle, Co. Down.
*c*1250. One of a pair of hinges from same context as two hinge pivots, hasp and barre padlock, all perhaps from same door.
Nailed U-shaped eye, strap with broken bifurcated terminal. L 332mm
Waterman 1954, 138, fig 12.2

**H421 HINGE**
Stonar, Kent.
*c*1275–1385. Found with hinge pivots **H324** and **H327**.
Nailed U-shaped eye, strap with bifurcated terminal. l 341mm.
Excavated by N Macpherson-Grant.

**H422 HINGE** (not illustrated)
Northolt m anor, Greater l ondon.
1300–1350 with 13th-century residual material.
Nailed U-shaped eye, broken strap.
L 150mm.
Excavated by J G Hurst.

**H423 HINGE** (not illustrated)
Northolt Manor, Greater London.
1200–1300.

Nailed U-shaped eye, broken strap.
L 160mm.
Excavated by J G Hurst.

**H424 HINGE** (not illustrated)
Stonar, Kent.
Around mid to late 14th century.
Nailed U-shaped eye, broken strap. l 291mm, W 31mm.
Excavated by N Macpherson-Grant.

**H425 HINGE** (not illustrated)
Stonar, Kent.
*c*1275–1385.
Nailed U-shaped eye, broken strap. l 186mm, W 24mm.
Excavated by N Macpherson-Grant.

**H426 HINGE**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Nailed U-shaped eye with shaped rear terminal, complete tapering strap. Hinge distorted. L 239mm.
Shortt 1972, 120, fig 5.33.

**H427 HINGE**
King's Lynn, Norfolk.
*c*1250–1300.
Nailed U-shaped eye with shaped rear terminal; simply shaped terminal to strap.
L 223mm.
Goodall and Carter 1977, 293, fig 133.14.

**H428 HINGE**
Winchester, Hampshire.
Late 13th–early 14th century.
Nailed U-shaped eye, broken strap.
L 163mm.
Goodall 1990-10, fig 85.669.

**H429 HINGE**
Stonar, Kent.
*c*1275–1385.
Nailed U-shaped eye, rear terminal broken.

Strap complete with shaped terminal.
L 196mm.
Excavated by N Macpherson-Grant.

**H430/H264 HINGE AND HINGE PIVOT**
Stonar, Kent.
*c*1275 to 1385.
Strap hinge with broken nailed U-shaped eye retaining hinge pivot (see **H367**). Hinge L 94mm.
Excavated by N Macpherson-Grant.

**H431 HINGE** (not illustrated)
Gomeldon, Wiltshire.
13th century.
Nailed, U-shaped eye with broken rear terminal, strap broken. L 118mm.
musty and Algar 1986.

**H432 HINGE**
King's l ynn, Norfolk.
*c*1250–1350.
Nailed U-shaped eye with shaped rear terminal, simply shaped terminal to strap.
L 186mm.
Goodall and Carter 1977, 293, fig 133.15.

**H433 HINGE**
Castle Acre Castle, Norfolk.
Second half 12th century.
Nailed U-shaped eye, plain strap. l 175mm.
Goodall 1982, fig 39, no. 54.

**H434 HINGE**
Chew v alley l ake, Somerset.
13th century or later.
Broken nailed U-shaped eye, terminal to strap. L 178mm.
Rahtz and Greenfield 1977, 326, fig 121.5.

**H435/H367 HINGE AND HINGE PIVOT**
Stonar, Kent.
*c*1275–1385.
Broken hinge with nailed U-shaped eye clasping hinge pivot with broken shank.

Hinge l 103mm, hinge pivot H 45mm, L 57mm.
Excavated by N Macpherson-Grant.

**H436 HINGE**
Alsted, Surrey.
*c*1270–1350.
Nailed U-shaped eye with shaped rear terminal and complete tapering strap.
L 147mm.
Goodall 1976a, 56, fig 34.5.

**H437 HINGE**
Northampton.
Later 15th century.
Nailed U-shaped eye with shaped rear terminal. Strap complete, terminal distorted. L 138mm.
Goodall *et al* 1979, 268, fig 117.17.

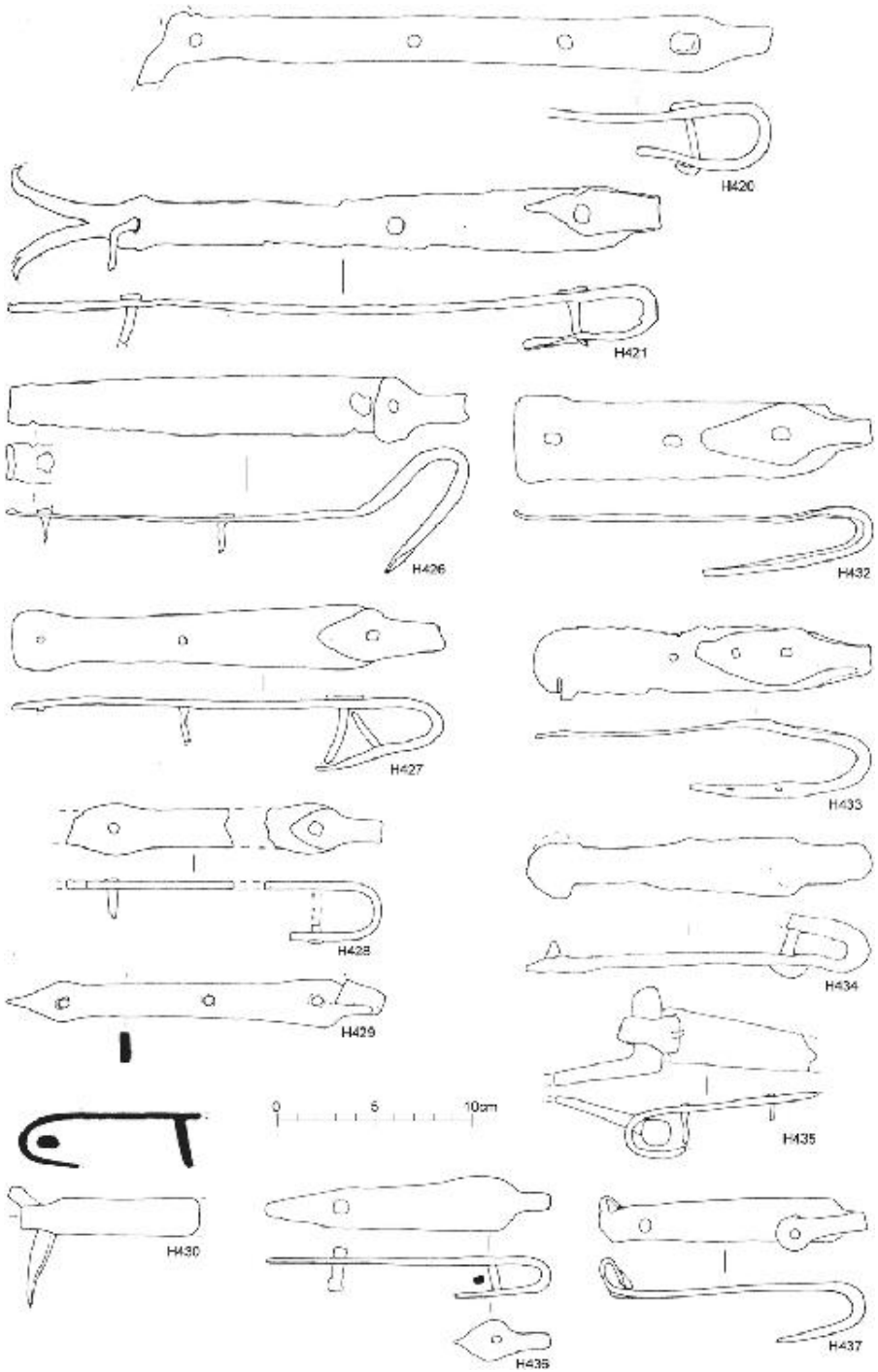



FIGURE 9.20
*Hinges*

**H438 HINGE**

Stonar, Kent.
*c*1275–1385.
Broken U-shaped eye, strap with terminal.
L 130mm.
Excavated by N Macpherson-Grant.

**H439 HINGE**
Northampton.
Early 15th century, from *c*1410 –20.
Nailed U-shaped eye, rear terminal and strap broken. L 93mm.
Goodall *et al* 1979, 268, fig 117.16.

**H440 HINGE**
Badby, Northamptonshire.
1198–1213 to early 14th century.
Nailed U-shaped terminal, strap broken.
L 103mm.
Excavated by Mrs M Gray.

**H441 HINGE** (not illustrated)
Stonar, Kent.
*c*1150–*c*1225.
Nailed U-shaped eye, strap broken. L 62mm.
Excavated by N Macpherson-Grant.

**H442 HINGE** (not illustrated)
Grenstein, Norfolk.
Late 14th, 15th century.
Distorted nailed U-shaped eye. L 63mm.
Goodall 1980c.

**H443 HINGE** (not illustrated)
Oxford.
*c*1325–*c*1400.
Nailed, U-shaped eye with shaped rear terminal, strap broken. L 46mm.
Goodall 1977e, 146, fig 27.40.

**H444 HINGE**
Ellington, Cambridgeshire.
Mid 12th to second half 13th century.
Nailed U-shaped eye with shaped rear terminal, broken strap. L 50mm.
Goodall 1971, 68, fig 12.20.

**H445 HINGE** (not illustrated)
Alsted, Surrey.
*c*1250–1350.
Nailed U-shaped eye with shaped rear terminal and broken strap. L 46mm.
Goodall 1976a, 56, fig 34.6.

**H446 HINGE**
Northampton.
End of 11th to middle of 15th century.
Rear terminal and loop from nailed U-shaped eye of hinge. L 76mm.
Goodall *et al* 1979, 268, fig 117.18.

**H447 HINGE** (not illustrated)
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.
Rear terminal from nailed U-shaped eye, strap broken. L 70mm.
Goodall 1977a, 257, fig 45.34.

**H448 HINGE**
The Hamel, Oxford.
15th century.
Rear terminal from nailed U-shaped eye. L 68mm.
Goodall 1980d, fig 29, no. 32.

**H449 HINGE**
Northampton.
*c*1500.
Spiked U-shaped eye, incomplete. Strap broken.
L 184mm.
Goodall *et al* 1979, 268, fig 117.2.

**H450 HINGE**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.
Spiked U-shaped eye, broken strap. L 175mm.
Excavated by Mrs M Gray.

**H451 HINGE**
Hen b las, Clwyd.
14th century.
Spiked U-shaped eye, broken strap. L 68mm.
Leach 1960, 23, fig 13.12.

**H452 HINGE**
Hangleton, East Sussex.
13th–14th century.
Spiked U-shaped eye, complete strap.
L 163mm.
Holden 1963, 169, fig 36.9.

**H453 HINGE**
North e lmham Park, Norfolk.
*c*1150–*c*1600.
Plain strap, spiked U-shaped eye. L 123mm.
Goodall 1980a, 513, fig 266.62.

**H454 HINGE** (not illustrated)
Winchester, Hampshire.
Late 13th century.
Broken strap with chisel-cut eye supporting stapled hasp **H570**. Hinge L 53mm. For illustration see **H570**.
Goodall 1990-18, fig 304.3499.

**H455 HINGE** (not illustrated)
Winchester, Hampshire.
15th century.
Spiked U-shaped eye, broken parallel-sided strap. L 67mm.
Goodall 1990-18, 974, no. 3453.

**H456 HINGE** (not illustrated)
Winchester, Hampshire.
Late 11th–early 12th.
Spiked U-shaped eye, broken tapering strap.
L 73mm.
Goodall 1990-18, 974, no. 3452.

**H456a HINGE** (not illustrated)
Winchester, Hampshire.
14th century.
End looped strap, broken. L 38mm, W 17mm.
Goodall 1990-18, 975, no. 3457.

**H457 HINGE** (not illustrated)
Dover Castle, Kent.
Late 13th century.

b roken end-looped hinge and curved hasp **H604**. Hinge l 71mm. For illustration see **H604** .
Rigold 1967, 109, fig 9.Fe4.

**H458 HINGE**
Winchester, Hampshire.
Early to mid 13th century.
Broken, angled, end looped strap with non-ferrous plating. L 47mm.
Goodall 1990-18, fig 303.3456.

**H459 HINGE**
Ospringe, Kent.
*c*1483–1550.
Pinned hinge, originally T-shaped but one strap broken. L 119mm.
Goodall 1979c, 132, fig 21.61.

**H460 HINGE**
Stonar, Kent.
*c*1275–1385.
Broken plate from pinned hinge. L 100mm.
Excavated by N Macpherson-Grant.

**H461 HINGE**
Rhuddlan, Clwyd.
Probably very late 13th century or 14th centur Shaped plate from pinned hinge. L 102mm.
Goodall 1994, fig 17.3, no. 51.

**H462 HINGE**
Alsted, Surrey.
*c*1250–1405.
Broken plate with single eye from pinned hing
L 79mm.
Goodall 1976a, 56, fig 35.33.

**H463 HINGE** (not illustrated)
Winchester, Hampshire.
16th century
Broken pinned hinge joined to flat stapled has **H581**. Hinge L 81mm. For illustration see **H581**.
Goodall 1990-18, fig 304.3506.

**H464 HINGE**
Ospringe, Kent.
*c*1483–1550.
Pinned hinge with two straight straps, one broken. L 115mm.
Goodall 1979c, 132, fig 21.62.

**H465 HINGE** (not illustrated)
Winchester, Hampshire.
14th century.
Broken, tapering strap with single eye from pinned hinge. L 96mm, maximum W 22mm.
Goodall 1990-18, 975, no. 3458.

**H466 HINGE**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.
Plate with single eye from pinned hinge.
L 81mm.
Excavated by Mrs M Gray.

**H467 HINGE**
Stonar, Kent.
*c*1275–1385.
Plate with pair of eyes from pinned hinge.
L 68mm.
Excavated by N Macpherson-Grant.

**H468 HINGE**
Ospringe, Kent.
*c*1483–1550.
Pinned hinge with broken straps, the more complete shaped. L 77mm.
Goodall 1979c, 132, fig 21.63.

**H469 HINGE**
Winchester, Hampshire.
?Mid 16th century.
Double leaf pinned hinge with non-ferrous plating. L 64mm.
Goodall 1990-18, fig 303.3460.

**H470 HINGE**
Ospringe, Kent.
*c*1483–1550.

Pinned hinge, one plate incomplete. L 36mm.
Goodall 1979c, 132, fig 21.64.

**H471 HINGE**
Grenstein, Norfolk.
Late 14th, 15th century.
Strap from pinned hinge. L 79mm.
Goodall 1980c, fig 79, no. 56.

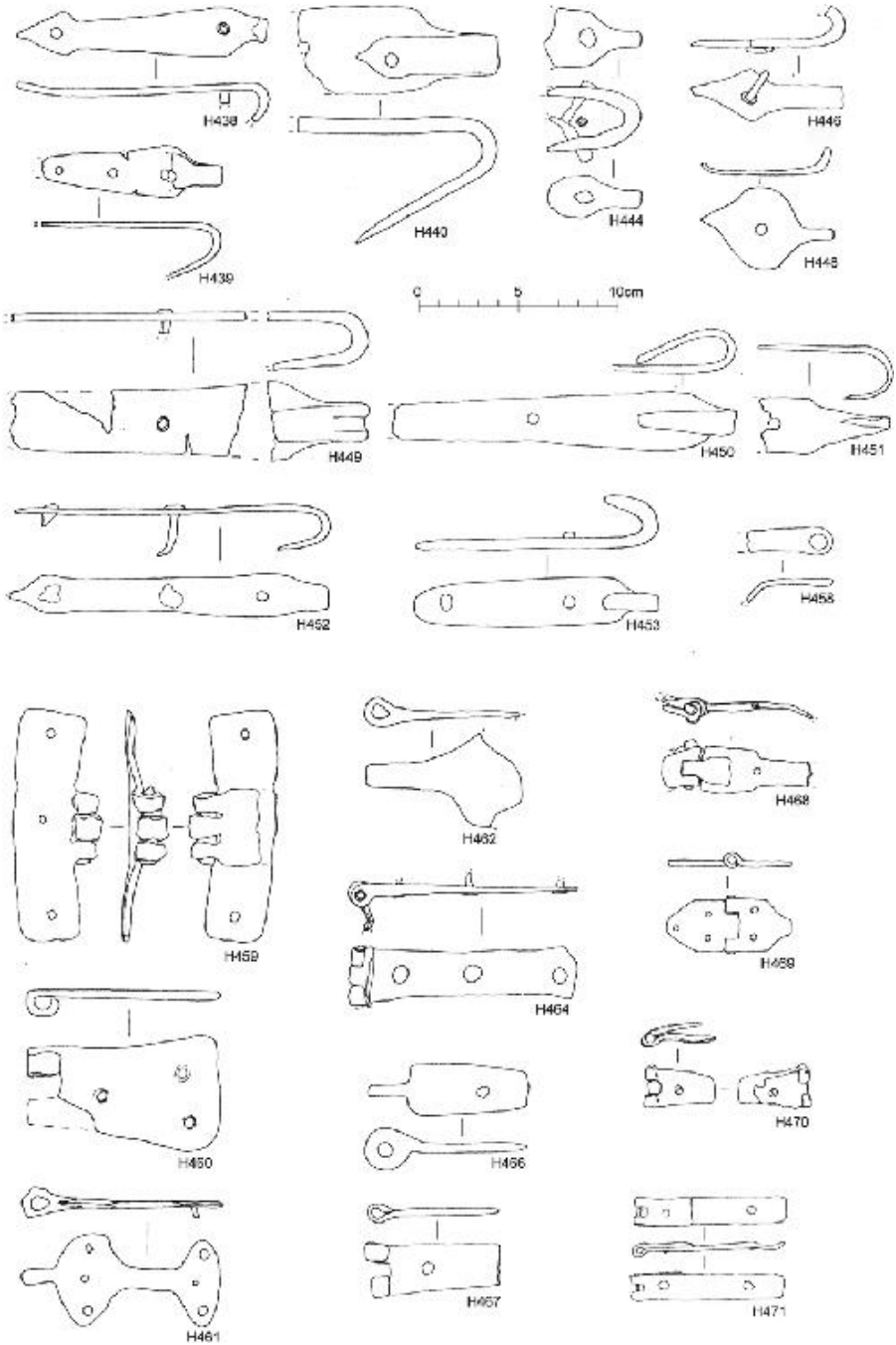



FIGURE 9.21
*Hinges*

**H472 STRAP**
Lydney Castle, Gloucestershire.

12th century, possibly into 13th century.
Crescent-shaped strap. D 193mm.
Casey 1931, 254, pl XXXVI.19.

**H473 STRAP**
Weoley Castle, Birmingham, West Midlands.
*c*1230–1270.
Broken strap. L 120mm.
Oswald 1962, 130, fig 51.15.

**H474 STRAP**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Imcomplete strap retaining terminal.
L 129mm.
Goodall 1979a, 118, fig 60.10.

**H475 STRAP**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Broken strap. L 122mm.
Goodall 2002, fig 7.3, no. 46.

**H476 STRAP**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Broken strap. L 98mm.
Goodall 1979a, 118, SF 12248.

**H477 STRAP**
King's Lynn, Norfolk.
*c*1150–1250.
Shaped terminal, strap broken. Wood grain visible across one side. L 236mm.
Goodall and Carter 1977, 293, fig 133.13.

**H478 STRAP**
Cheddar, Somerset.
Late 10th–12th century.
Shaped terminal, broken and distorted strap.
L 214mm.
Goodall 1979d, 270, fig 91.5.

**H479 STRAP** (not illustrated)
King's l ynn, Norfolk.
*c*1250–1300.
Shaped terminal, identical to **H477**, strap broken. Wood grain visible along length.
L 100mm.
Goodall and Carter 1977, 293, bl SF D200.

**H480 STRAP**
Cheddar, Somerset.
Later 13th century–*c*1600.
Shaped terminal, broken strap. L 88mm.
Goodall 1979d, 270, fig 91.192.

**H481 STRAP**
Portchester Castle, Hampshire.
13th century.
Broken, tapering strap with terminal.
L 111mm.
Hinton 1977, 201, fig 108.58.

**H482 HINGE**
Wharram Percy, North Yorkshire.
Mid 15th to early 16th century.
Broken strap with shaped terminal.
L 120mm.
Goodall 1979a, 121, fig 64.88.

**H483 STRAP**
Hangleton, East Sussex.
13th century.
Broken strap with terminal. L 192mm.
Holden 1963, 169, fig 36.10.

**H484 STRAP** (not illustrated)
Eynsford Castle, Kent.
*c*1250.
Broken strap with edge beading and shaped terminal. L 168mm.
Rigold 1971, 144, fig 9.3.

**H485 STRAP**
Clough Castle, Co. Down.

*c*1200–*c*1225.
Broken strap with terminal. L 131mm.
Waterman 1954, 140, fig 12.3.

**H486 STRAP**
Winchester, Hampshire.
15th–16th century.
Broken strap with terminal. L 84mm.
Goodall 1990-18, fig 303.3466.

**H487 STRAP**
Waltham Abbey, Essex.
13th–15th century.
Broken strap retaining terminal. L 264mm.
Goodall 1978d, 158, fig 21.3.

**H488 STRAP**
Stonar, Kent.
*c*1275–1385.
Broken strap with terminal. L 144mm.
Excavated by N Macpherson-Grant.

**H489 STRAP**
The Mount, Princes Risborough,
buckinghamshire.
13th to 15th century.
Broken strap with terminal. L 124mm.
Pavry and Knocker 1953–60, 6, fig 13.6.

**H490 STRAP**
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Shaped terminal, broken strap. L 65mm.
mynard 1969, 84, fig 13.IW82.

**H491 STRAP**
Winchester, Hampshire.
Late 17th–?early 18th century.
Broken strap and terminal. L 85mm.
Goodall 1990-10, fig 85.677.

**H492 STRAP** (not illustrated)

Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Broken strap with bifurcated terminal.
L 89mm.
Goodall 1979a, 118, fig 60.9.

**H493 STRAP**
Kiln Combe, Bullock Down, East Sussex.
*c*1200–1500.
Broken bifurcated terminal. L 52mm.
Excavated by P L Drewett.

**H494 STRAP**
Stonar, Kent.
*c*1150 –*c*1225.
Broken strap with bifurcated terminal.
L 70mm.
Excavated by N Macpherson-Grant.

**H495 STRAP** (not illustrated)
Winchester, Hampshire.
Late 13th–early 14th century.
Broken strap with bifurcated terminals.
L 101mm.
Goodall 1990-10, fig 85.676.

**H496 STRAP** (not illustrated)
Bordesley Abbey, Hereford and Worcester.
Site: *c*1140–1538 and later.
Broken strap with bifurcated terminal.
L 62mm.
Wright 1976, 195, fig 35.9.

**H497 STRAP** (not illustrated)
Stonar, Kent.
*c*1275–1385.
Broken strap and terminal. l 45mm.
Excavated by N Macpherson-Grant.

**H498 STRAP**
Dyserth Castle, Clwyd.
Site: 1241–63.

Damaged terminal, broken strap. L 39mm.
Glenn 1915.

**H499 STRAP**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Shaped terminal, strap broken. L 138mm.
Goodall 1988, fig 77.57; borenius and Charlton 1936.

**H500 STRAP**
Weoley Castle, b irmingham, West m idlands.
*c*1270 –1600.
Broken scrolled terminal. L 73mm.
Birmingham City museum, WC 415. For site see Oswald 1962.

**H501 STRAP**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Strap with scrolled terminal. Total
L 610mm.
Taylor 1974. For site see Oswald 1962.

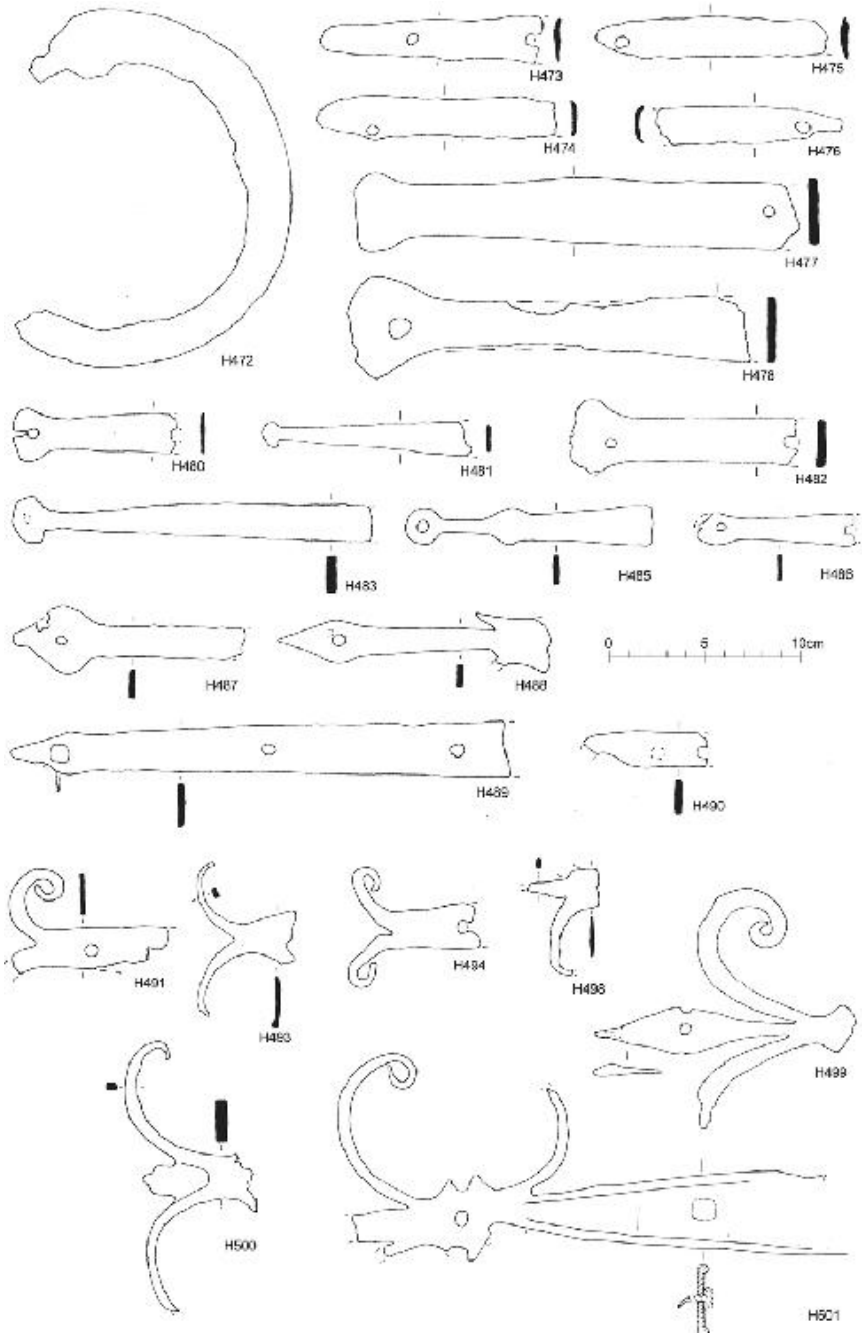



FIGURE 9.22
*Straps*

**H502 STRAP**
Winchester, Hampshire.
Late 17th-century context, typologically 13th–14th century.

Broken strap with raised, decorated band and scrolled terminals. L 215mm.
Goodall 1990-10, fig 85.678.

**H503 STRAP**
b eckery Chapel, Glastonbury, Somerset.
Later 13th to?15th centuries.
Shaped terminal, strap broken. L 119mm.
Rahtz and Hirst 1974, 61, fig 22.24.

**H504 HINGES** (not illustrated)
St Neots Priory, Cambridgeshire.
13th century.
Four hinges with broken straight straps with opposed double scrolls. L 170–269mm.
Tebbutt 1966, 39, pl v c.

**H505 STRAP**
Winchester, Hampshire.
Mid to late 13th century.
Broken scrolled terminal. L 66mm.
Goodall 1990-10, fig 85.679.

**H506 STRAP**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Scrolled terminal, incomplete. l 69mm.
Goodall 2002, fig 7.5, no. 50.

**H507 STRAP**
Winchester, Hampshire.
14th century.
Broken scrolled terminal. L 73mm.
Goodall 1990-10, fig 85.680.

**H508 STRAP**
Northampton.
End of 11th to middle of 15th century.
Shaped strap, distorted. L 64mm.
Goodall *et al* 1979, 268, fig 117.15.

**H509 STRAP**
Oxford.

*c*1325–*c*1400.
Shaped?terminal. L 58mm.
Goodall 1977e, 146, fig 27.39.

**H510 STRAP**
North Elmham Park, Norfolk.
*c*1500–*c*1600.
Strap fragment with broken terminal.
L 108mm.
Goodall 1980a, 513, fig 266.63.

**H511 STRAP**
Winchester, Hampshire.
Late 15th–early 16th century.
Broken plate with three heart-shaped lobes.
L 68mm.
Goodall 1990-18, fig 303.3459.

**H512 CORNER BINDING**
Thelsford Priory, Warwickshire.
?14th century.
Corner binding strip, one arm broken, from wooden coffin surrounding lead encased skeleton. L 89 by 84mm.
Excavated by Mrs M Gray.

**H513 CORNER BINDING**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Corner binding with perforations. L 55 by 61mm.
Goodall 1988, fig 80.88; Borenius and Charlton 1936.

**H514 CORNER BINDING**
Northampton.
*c*1470–1500 to middle 16th century.
One arm broken, other retains nail. L 75 by 47mm.
Goodall *et al* 1979, 273, fig 119.75.

**H515 CORNER BINDING**
Kings Langley, Hertfordshire.
1291–92 to later 14th or first half 15th century.
Incomplete length. L 65mm.
Neal 1973, 56, fig XV .60.

**H516 CORNER BINDING**
(not illustrated)
Southampton, Hampshire.
14th century.
Complete piece with nail-holes at each corner. L 86mm, W 83mm.
Harvey 1975b, 285, fig 255.2061.

**H517 HINGE**
Upton, Gloucestershire.
Late 13th to late 14th century.
Looped eye broken. L 76mm.
Hilton and Rahtz 1966, 121, fig 14.38.

**H518 HINGE**
Castle Acre Castle, Norfolk.
Last quarter 12th century.
Terminal broken. L 85mm.
Goodall 1982, fig 39, no. 62.

**H519 HINGE**
Faxton, Northamptonshire.
Site: 12th to 15th century.
Looped eye, near complete strap. L 69mm.
Excavated by L A S Butler.

**H520 HINGE**
Castle Acre Castle, Norfolk.
1140s/1150s deposit with derived material.
Site founded soon after 1066.
Hinge, loop broken. Non-ferrous plating.
L 56mm.
Goodall 1982, fig 39, no. 61.

**H521 HINGE**
Goltho Manor, lincolnshire.
11th century.
Loop broken. L 55mm.
Goodall 1987, fig 158.93.

**H522 HINGE**
Castle Acre Castle, Norfolk.
1140s deposit with derived material. Site founded soon after 1066.

Hinge, loop broken. Non-ferrous plating.
L 43mm.
Goodall 1982, fig 39, no. 60.

**H523 HINGE**
Winchester, Hampshire.
*c*1110.
Spiked U-shaped eye, strap with bifurcated terminal. L 70mm.
Goodall 1990-18, fig 303.3449.

**H524 HINGE**
Winchester, Hampshire.
Early to mid 13th century.
Distorted spiked U-shaped eye, broken strap. L 51mm.
Goodall 1990-18, fig 303.3450.

**H525 HINGE**
Ospringe, Kent.
*c*1483–1550.
End-looped hinge with rivet and non-ferrous plating. L 34mm.
Goodall 1979c, 132, fig 21.70.

**H526 HINGE**
Upton, Gloucestershire.
Late 13th to late 14th century.
Shaped and decorated terminal, broken looped eyes. Non-ferrous plating. L 46mm.
Hilton and r ahtz 1966, 121, fig 13.5.

**H527 HINGE**
Castle Acre Castle, Norfolk.
Pre *c*1085. Site founded soon after 1066.
Shaped hinge with inlaid decoration and non-ferrous plating. L 84mm.
Goodall 1982, fig 39, no. 59.

**H528 HINGE** (not illustrated)
Durham.
Later 11th–mid 12th century.
Broken Y-shaped pinned hinge and angled stapled hasp (**H583**), both with surface decoration. Hinge L 97mm. For illustration see **H583**.
Carver 1979, 19, fig 13.129/1668

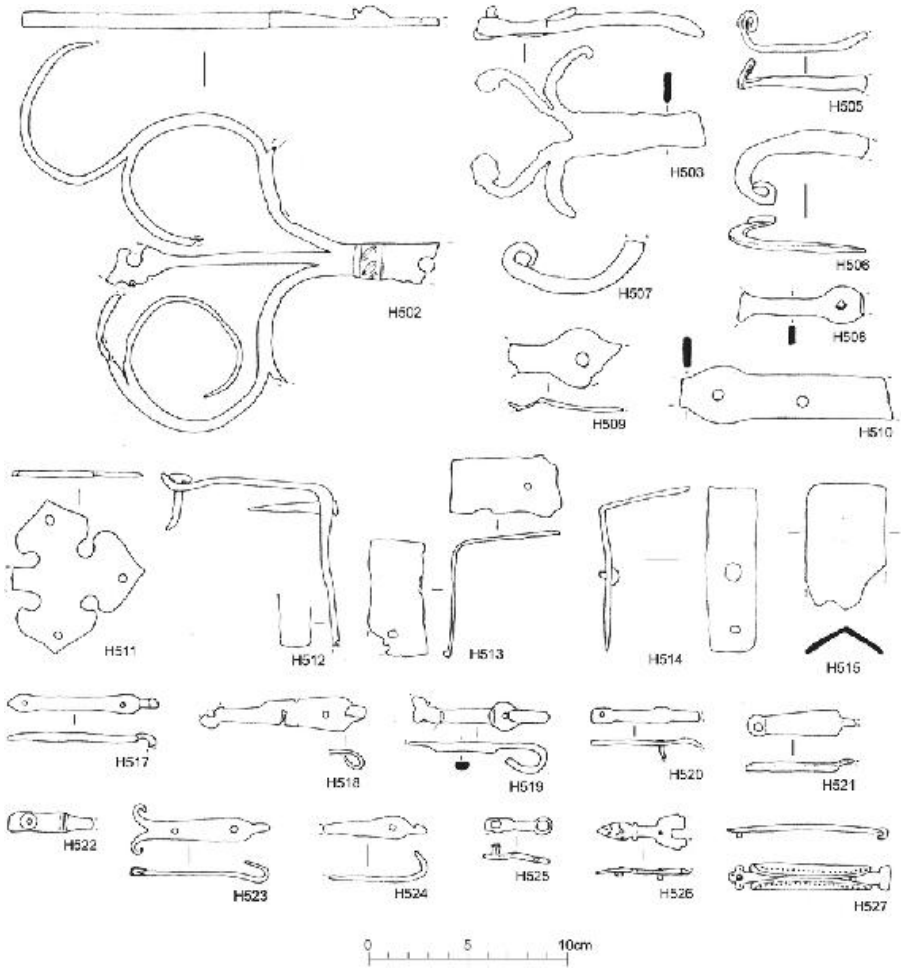



FIGURE 9.23
*Hinges, straps and corner bindings*

**H529 STRIP**
Rhuddlan, Clwyd.
End of 13th century
Broken strip, curved at one end. L 117mm
Goodall 1994, fig 17.3, no. 58.

**H530 STRIP** (not illustrated)
Grenstein, Norfolk.
Late 14th, 15th century.
Broken strip, rectangular section. L 114mm, W 15mm.
Goodall 1980c, fig 79, no. 55.

**H531 BINDING STRIP**

Grenstein, Norfolk.
Late 14th, 15th century.
Broken strip retaining single rivet. L 92mm.
Goodall 1980c, fig 79, no. 52.

**H532 BINDING STRIP**
Brixworth, Northamptonshire.
*c*1100–1400.
Broken strip, D-shaped section. L 72mm, W 7mm.
Goodall 1977g, 94, fig 9.12.

**H533 BINDING STRIP** (not illustrated)
Rhuddlan, Clwyd.
13th century,?later part.
Broken strip, rectangular section. L 49mm, W 7mm.
Goodall 1994, fig 17.3, no. 49.

**H534 BINDING STRIP**
Tattershall College, lincolnshire.
11th century to 1440.
Broken strip. L 118mm.
Excavated by L J Keen.

**H535 BINDING STRIP**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.
Distorted, incomplete strip. L 117mm.
Excavated by Mrs M Gray.

**H536 BINDING STRIP**
Winchester, Hampshire.
11th century.
Broken strip with simply moulded expansion. Non-ferrous plating. L 77mm.
Goodall 1990-13, fig 229.2442.

**H537 BINDING STRIP**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Broken strip with perforated expansion.
L 173mm.
Goodall 1988, fig 80.84; Borenius and Charlton 1936.

**H538 BINDING STRIP**
Bolton, Humberside.
Mid 14th century.
Broken, shaped strip with non-ferrous plating. L 69mm.
Goodall 1978b, 143, fig 30.25.

**H539 BINDING STRIP**
Bolton, Humberside.
Mid 14th century.
Broken, shaped strip with non-ferrous plating. L 91mm.
Goodall 1978b, 143, fig 30.26.

**H540 BINDING STRIP** (not illustrated)
Ospringe, Kent.
*c*1483–1550.
Broken strip with perforated expansion.
Non-ferrous plating. L 39mm, W 17mm.
Goodall 1979c, 132, fig 21.69.

**H541 BINDING STRIP**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Riveted terminal, broken shank. L 80mm.
Goodall 1979a, 118, fig 60.18.

**H542 BINDING STRIP**
Winchester, Hampshire.
Late 14th–?16th century.
Incomplete with moulded terminal.
Non-ferrous plating. L 43mm.
Goodall 1990-13, fig 229.2447.

**H543 BINDING STRIP**
Winchester, Hampshire.
Mid 11th century.
Incomplete strip with double riveted strip.
Non-ferrous plating. L 33mm.
Goodall 1990-13, fig 229.2441.

**H544 BINDING STRIP**
Stonar, Kent.
*c*1275–1385.

Broken, angled strip and terminal.
Non-ferrous plating. L 84mm.
Excavated by N Macpherson-Grant.

**H545 BINDING STRIP**
Stonar, Kent.
*c*1275–1385.
Broken, angled strip with terminal.
Non-ferrous plating. L 70mm.
Excavated by N Macpherson-Grant.

**H546 BINDING STRIP** (not illustrated)
Cambokeels, Durham.
Site: later 14th to early 16th century.
Broken strip and terminal. L 69mm, W 16mm.
Bowes Museum, Barnard Castle. For site see Hildyard and Charlton 1947; Hildyard 1949.

**H547 BINDING STRIP** (not illustrated)
Oxford.
Second half 11th century.
Broken strip. L 33mm, W 9mm.
Goodall 1977e, 146, fig 27.41.

**H548 BINDING STRIP**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Broken strip with rounded terminal and expansion, both with radiating decorative grooves. Non-ferrous plating. L 126mm.
Salisbury and South Wiltshire Museum, Salisbury, O.S.C2(d).

**H549 BINDING STRIP**
Netherton, Hampshire.
Mid 14th century.
Broken strip with terminal. L 87mm.
Goodall 1990-18, fig 9.6, no. 335.

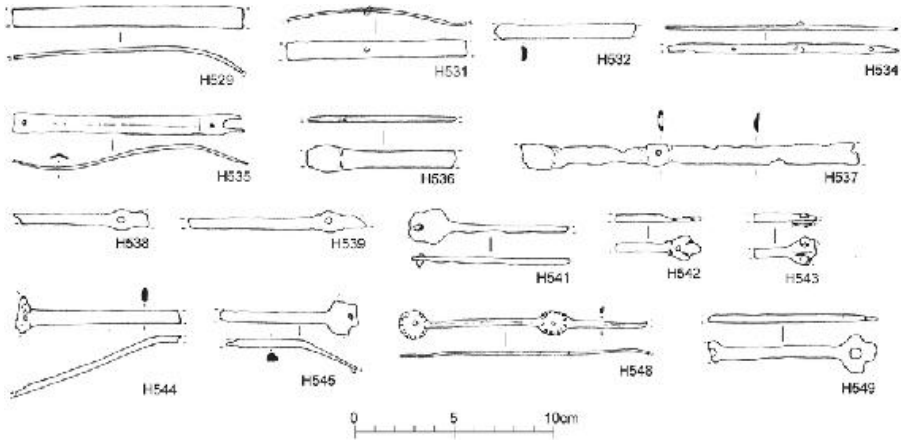



FIGURE 9.24
*Strip and binding strips*

**H550 BINDING STRIP**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Broken angled strip with terminal.
Non-ferrous plating. L 88mm.
Goodall 1979a, 118, fig 60.17.

**H551 BINDING STRIP** (not illustrated)
Stonar, Kent.
*c*1275–1385.
Broken and distorted strip and terminal.
Non-ferrous plating. L 85mm, W 18mm.
Excavated by N Macpherson-Grant.

**H552 BINDING STRIP**
Winchester, Hampshire.
Late 11th–early 12th century.
Broken strip and terminal. Decorative grooves. Non-ferrous plating. L 59mm.
Goodall 1990-13, fig 229.2443.

**H553 BINDING STRIP**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Flattened, riveted terminal and broken shank. L 77mm.
Goodall 1988, fig 80.85; Borenius and Charlton 1936.

**H554 BINDING STRIP**
Winchester, Hampshire.
Late 11th–12th century.
Terminal complete, arms broken.
Decorative grooves. Non-ferrous plating. L 92mm.
Goodall 1990-13, fig 229.2444.

**H555 BINDING STRIP**
Therfield, Hertfordshire.
Saxo-Norman to 12th century.
Incomplete lobed strip with non-ferrous plating. Fragment of mineralised wood noted adhering to object. L 54mm.
Biddle 1964, 81, fig 23.2.

**H556 BINDING STRIP**
Northampton.
11th century.
Broken, moulded strip retaining non-ferrous plating in decorative grooves. L 49mm.
Goodall *et al* 1979, 273, fig 119.82.

**H557 BINDING STRIP**
Rhuddlan, Clwyd.
Pre-13th century.
Broken, sinuous strip. L 68mm.
Goodall 1994, fig 17.3, no. 52.

**H558 BINDING STRIP**
Gloucester.
11th–early 12th century.
Scrolled strip, one end broken and distorted.
Traces of simple surface decoration.
L 59mm.
Excavated by H Hurst.

**H559 BINDING STRIP**
Castle Acre Castle, Norfolk.
Second half 12th century.
Incomplete terminal with fixing stud.
Non-ferrous plating. L 32mm.
Goodall 1982, fig 39, no. 58.

**H560 BINDING STRIP**
Rhuddlan, Clwyd.
11th century.
Broken strip retaining one riveted terminal.
L 49mm.
Goodall 1994, fig 17.3, no. 53.

**H561 BINDING STRIP**
Wroughton Copse, Fyfield Down, Wiltshire.
12th to (mid?) 13th century.
Near complete strip with riveted terminals.
L 45mm.
Excavated by P J Fowler.

**H562 BINDING STRIP**
Wroughton Copse, Fyfield Down, Wiltshire.
(Mid?) 13th to early 14th century.
Strip with round, perforated terminals, one broken. L 67mm.
Excavated by P J Fowler.

**H563 BINDING STRIP**
Goltho, lincolnshire.
Late 14th to early 15th century.
Broken strip, one terminal complete. l 59mm.
Goodall 1975a, 86, fig 40.82.

**H564 BINDING STRIP**
Winchester, Hampshire.
Mid 13th century.
Complete strip with shaped and decorated terminals. Non-ferrous plating. L 41mm.
Goodall 1990-13, fig 229.2451.

**H565/I143 STAPLED HASP AND LOCK**
Upton, Gloucestershire.
Late 13th to late 14th century.
Stapled hasp with hooked end and end loop. Lock **I143** incomplete, but retains bolt which passes through staple of hasp.
Non-ferrous plating on hasp. Hasp L 51mm.
For illustration see **I143**.
Hilton and r ahtz 1966, 121, fig 13.5.

**H566 STAPLED HASP**
Winchester, Hampshire.
13th century.
Flat stapled hasp with end loop. Broken tip.
Non-ferrous plating. L 53mm.
Goodall 1990-19, fig 304.3502.

**H567 STAPLED HASP**
Winchester, Hampshire.
?*c*1085–*c*1110
Flat stapled hasp with broken end loop.
L 61mm.
Goodall 1990-19, fig 304.3495.

**H568 STAPLED HASP** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Flat stapled hasp with near square-cut end.
Broken end loop as on **H569**. Non-ferrous plating. L 62mm.
Goodall 1990-19, 977, no. 3498.

**H569 STAPLED HASP**
Winchester, Hampshire.
13th century.
Flat stapled hasp with thickened tip and broken end loop. Non-ferrous plating. L 72mm.
Goodall 1990-19, fig 304.3501.

**H570/H454 STAPLED HASP AND HINGE**
Winchester, Hampshire.
Late 13th century.
Flat stapled hasp with hooked tip and end loop retaining spikes, U-shaped eye of hinge with chisel-cut break. Hasp l 114mm, hinge L 53mm.
Goodall 1990-19, fig 304.3499.

**H571 STAPLED HASP**
Stonar, Kent.
*c*1275–1385.
Flat stapled hasp with hooked tip and end loop. L 11mm.
Excavated by N Macpherson-Grant.

**H572 STAPLED HASP** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Flat stapled hasp similar to **H569** but with transversely set staple and broken circular end loop. L 123mm.
Goodall 1990-19, 977, no. 3497.

**H573 STAPLED HASP**
The Hamel, Oxford.
Early/mid 13th century.
Angled stapled hasp with moulded tip and end loop. L 153mm.
Goodall 1980d, fig 30, no. 46.

**H574 STAPLED HASP**
Winchester, Hampshire.
Early to mid 12th century.
Angled stapled hasp with end loop and moulded and thickened tip. Non-ferrous plating. L 178mm.
Goodall 1990-19, fig 304.3496.

**H575 STAPLED HASP**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Flat stapled hasp with broken looped eye.
L 59mm.
Shortt 1972, 120, fig 5.32.

**H576 STAPLED HASP**
Wintringham, Cambridgeshire.
Early 14th century.
Flat stapled hasp with hooked tip and broken looped eye. L 80mm.
Goodall 1977a, 257, fig 43.27.

**H577 STAPLED HASP AND HINGE**
Wallingstones, Hereford and Worcester.
1300–1325 to 1500.
Flat stapled hasp with moulded tip and broken pinned hinge.
Hasp L 87mm, hinge L 29mm.
Bridgewater 1970–72, 103, fig 16.51

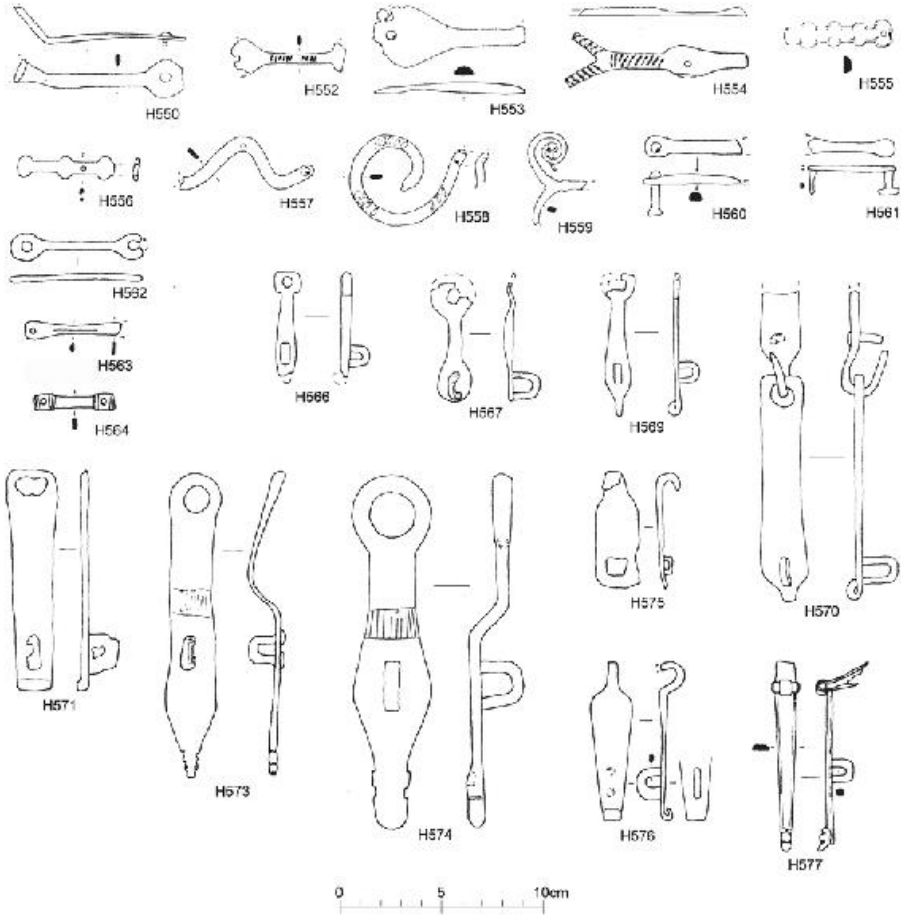



FIGURE 9.25
*Binding strips and stapled hasps*

**H578 STAPLED HASP**
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Flat stapled hasp with pinned hinge fragment. L 94mm.
Mynard 1969, 84, fig 13.IW86.

**H579 STAPLED HASP**
Gloucester.
11th, early 12th century.
Flat stapled hasp with moulded tip and looped eye. L 127mm.
Excavated by H Hurst.

**H580 STAPLED HASP**
Barrow mead, Somerset.

Site: 13th–14th century.
Flat stapled hasp with fragment of pinned hinge. L 135mm.
Rahtz 1960–61, 76, fig 8.1.

**H581/H463 STAPLED HASP AND HINGE**
Winchester, Hampshire.
16th century.
Flat stapled hasp with thickened tip and broken pinned hinge.
Hasp L 143mm, hinge L 81mm.
Goodall 1990-18, fig 304.3506.

**H582 STAPLED HASP**
Chew v alley l ake, Avon.
Late 13th to early 14th century.
Flat stapled hasp with looped eye. L 251mm.
Rahtz and Greenfield 1977, 326, fig 121.4.

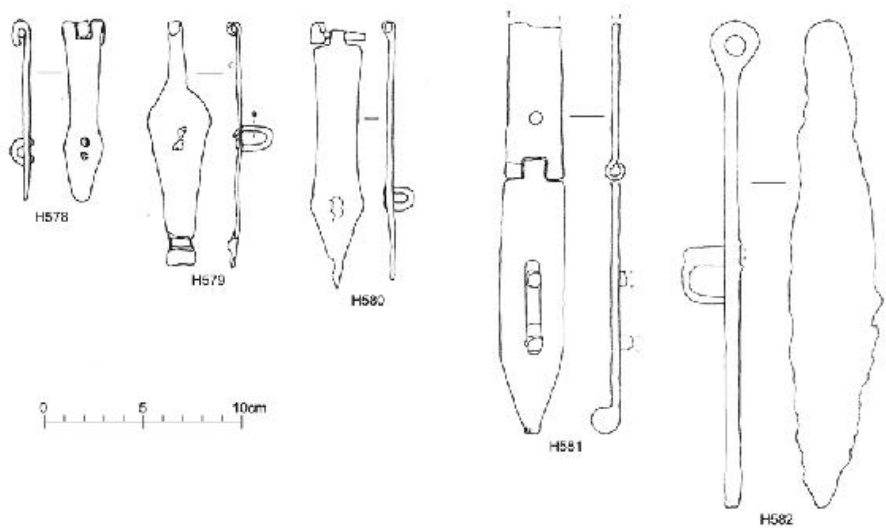



FIGURE 9.26
*Stapled hasps*

**H583/H528 STAPLED HASP AND HINGE**
Durham.
Later 11th–mid 12th century.
Angled stapled hasp and broken Y-shaped pinned hinge, both with surface decoration.
Hasp L 72mm.

Carver 1979, 19, fig 13.129/1668.

**H584 STAPLED HASP**
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Flat stapled hasp, incomplete, with hooked tip. L 102mm.
mynard 1969.

**H585 STAPLED HASP**
Rhuddlan, Clwyd.
Probably 12th–14th century.
Base of stapled hasp with decorated edges and non-ferrous plating. L 78mm.
Goodall 1994, fig 17.6, no. 97.

**H586 STAPLED HASP**
Hull, Humberside.
Early to mid 16th century.
Flat but distorted and broken stapled hasp.
L 74mm.
Goodall 1997b, 65, fig 27.82.

**H587 STAPLED HASP**
North e lmham Park, Norfolk.
*c*1500–*c*1600.
Broken flat stapled hasp with hooked tip.
L 63mm.
Goodall 1980a, 510, fig 265.13.

**H588 STAPLED HASP**
Upton, Gloucestershire.
Late 13th to late 14th century.
Incomplete hasp, staple missing. L 55mm.
Hilton and r ahtz 1966, 121, fig 14.35.

**H589 STAPLED HASP**
Winchester, Hampshire.
13th century.
Base of stapled hasp with hooked tip.
Non-ferrous plating. L 52mm.
Goodall 1990-19, fig 304.3509.

**H590 STAPLED HASP**
Chelmsford, e ssex.
From destruction debris deposited by *c*1560 on site founded in mid 13th century, dissolved 1537.
Broken, flat stapled hasp with knobbed base.
L 156mm.
Drury 1974, 59, fig 9.23.

**H591 HASP**
Winchester, Hampshire.
Mid 10th–early 11th century.
Flat hasp with hooked end. L 56mm.
Goodall 1990-19, fig 303.3474.

**H592 HASP**
Winchester, Hampshire.
Mid 11th century.
Flat hasp with hooked end. L 97mm.
Goodall 1990-19, fig 303.3476.

**H593 HASP**
Wharram Percy, North Yorkshire.
Mid 15th–early 16th century.
Flat hasp with hooked end. L 102mm.
Goodall 1979a, 121, fig 64.87.

**H594 HASP** (not illustrated)
Winchester, Hampshire.
Early 16th century.
Broken side from flat hasp. L 116mm.
Goodall 1990-19, 977, no. 3483.

**H595 HASP**
Northampton.
14th century.
Flat hasp with hooked end. l 152mm.
Central museum, Northampton. From between Bearwood Street and Silver Street.

**H596 HASP AND RING**
Northampton.
13th century to *c*1500.

Curved hasp with broken ring through hooked end. Hasp L 64mm, ring W 26mm.
Goodall *et al* 1979, 268, fig 116.14.

**H597 HASP**
Winchester, Hampshire.
*c*1222.
Curved hasp with hooked end. L 92mm.
Goodall 1990-19, 977, no. 3478.

**H598 HASP** (not illustrated)
Warkworth Castle, Northumberland.
Early medieval. Castle 12th–17th century.
Gently curved hasp with hooked end.
L 102mm, W 26mm.
Harbottle 1967, 120, fig 5.38.

**H599 HASP**
Winchester, Hampshire.
11th century.
Curved hasp with hooked end. L 105mm.
Goodall 1990-19, fig 303.3477.

**H600 HASP**
Portchester Castle, Hampshire.
Medieval.
Curved hasp with hooked end. L 107mm.
Hinton 1977, 201, fig 108.57.

**H601 HASP** (not illustrated)
Lyveden, Northamptonshire.
Site: second quarter 13th century to very early 14th century.
Curved hasp with hooked end. L 110mm, W 30mm.
b ryant and Steane 1971, 59, fig 15e.

**H602 HASP**
Wharram Percy, North Yorkshire.
Late 15th–early 16th century.
Gently curved hasp with hooked end.
L 110mm.
Goodall 1979a, 118, fig 60.8.

**H603 HASP** (not illustrated)
Gloucester.
13th century.
Broken, gently curved hasp. L 103mm, W 26mm.
Hassall and Rhodes 1974, 78, fig 30.13.

**H604/H457 HASP AND HINGE**
Dover Castle, Kent.
Late 13th century.
Curved hasp and broken end-looped hinge.
Hasp l 115mm, hinge L 71mm.
Rigold 1967, 109, fig 9.Fe 4.

**H605 HASP**
Oxford.
Late 12th century–*c*1250.
Curved hasp of spirally twisted iron with hooked end. L 115mm.
Goodall 1977e, 142, fig 25.4.

**H606 HASP**
Castle Acre Castle, Norfolk.
Second half 12th century.
Curved hasp with hooked end. L 118mm.
Goodall 1982, fig 40, no. 106.

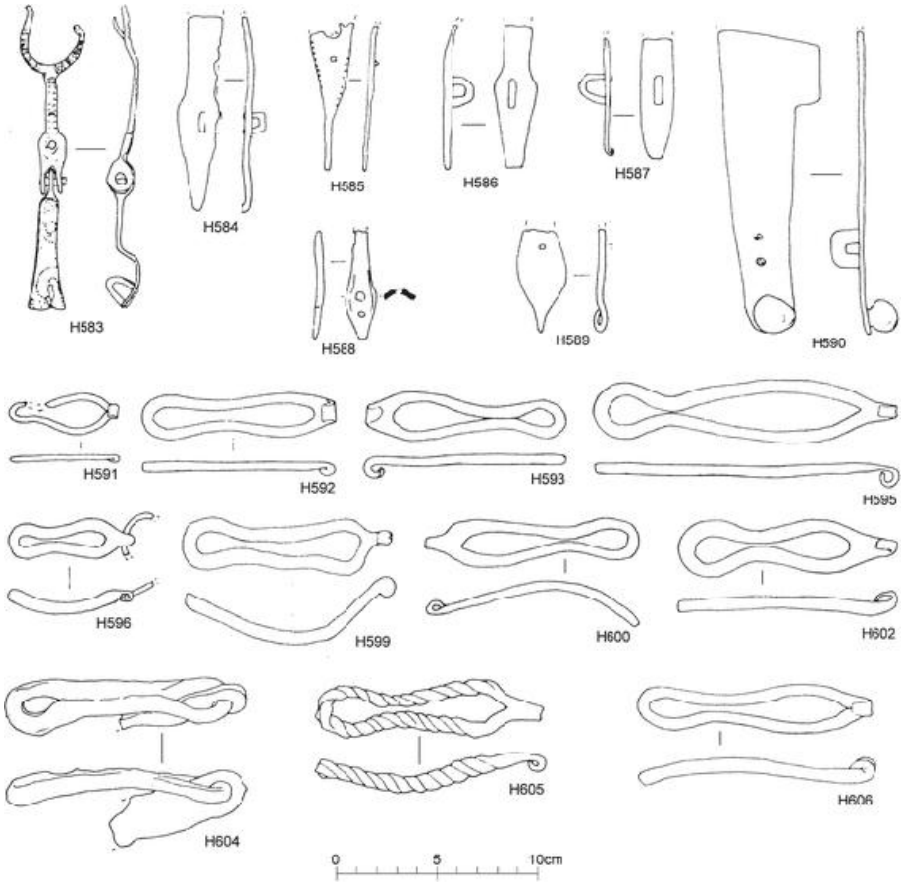



FIGURE 9.27
*Stapled hasps and hasps*

**H607 HASP** (not illustrated)
The Hamel, Oxford.
Late 12th–early 13th century.
Broken curved hasp. L 123mm, W 41mm.
Goodall 1980d.

**H608 HASP**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Curved hasp with hooked end. L 125mm.
Goodall 1977f, 46, iron object fig 1.12.

**H609 HASP**
Wroughton Copse, Fyfield Down, Wiltshire.
12th century (?).

Curved hasp with hooked end. L 127mm.
Excavated by P J Fowler.

**H610 HASP**
Grenstein, Norfolk.
Late 14th, 15th century.
Gently curved hasp with hooked end.
L 136mm.
Goodall 1980c, fig 80, no. 65.

**H611 HASP**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Curved hasp partly of spirally twisted iron with hooked end. L 136mm.
Goodall 1977f, 46, iron object fig 1.10.

**H612 HASP** (not illustrated)
Winchester, Hampshire.
Mid 13th century.
Curved hasp with hooked end. L 138mm.
Goodall 1990-19, 977, no. 3481.

**H613 HASP** (not illustrated)
North e lmham Park, Norfolk
*c*1500–*c*1600
Curved hasp with hooked end. One side broken. L 138mm, W 31mm
Goodall 1980a, 510, fig 265.17

**H614 HASP** (not illustrated)
Wintringham, Cambridgeshire.
Around early 14th century.
Curved hasp with hooked end. L 154mm, W 39mm.
Goodall 1977a, 257, fig 43.28.

**H615 HASP**
Kettleby Thorpe, licolnshire.
14th to early 15th century.
Curved hasp with hooked end. L 156mm.
Goodall 1974a, 33, fig 18.7.

**H616 HASP** (not illustrated)
King's Lynn, Norfolk.

*c*1150–1250.
Curved hasp with hooked end. L 160mm, W 27mm.
Goodall and Carter 1977, 293, fig 133.12.

**H617 HASP** (not illustrated)
Folkestone, Kent.
Mid 12th century.
Curved hasp of twisted iron with hooked end. L 166mm, W unknown.
Pitt-r ivers 1883, 463, pl XVIII.10.

**H618 HASP**
Winchester, Hampshire.
Early to mid 13th century.
Curved hasp of spirally twisted iron with hooked end. L 178mm.
Goodall 1990-19, fig 303.3480.

**H619 HASP**
Rhuddlan, Clwyd.
13th century, probably second half.
L -shaped hasp with hooked end. L 76mm.
Goodall 1994, fig 17.6, no. 100.

**H620 HASP**
Goltho m anor, lincolnshire.
*c*110 0 –1150.
L -shaped hasp partly of spirally twisted iron with hooked end. L 101mm.
Goodall 1987, fig 158.92.

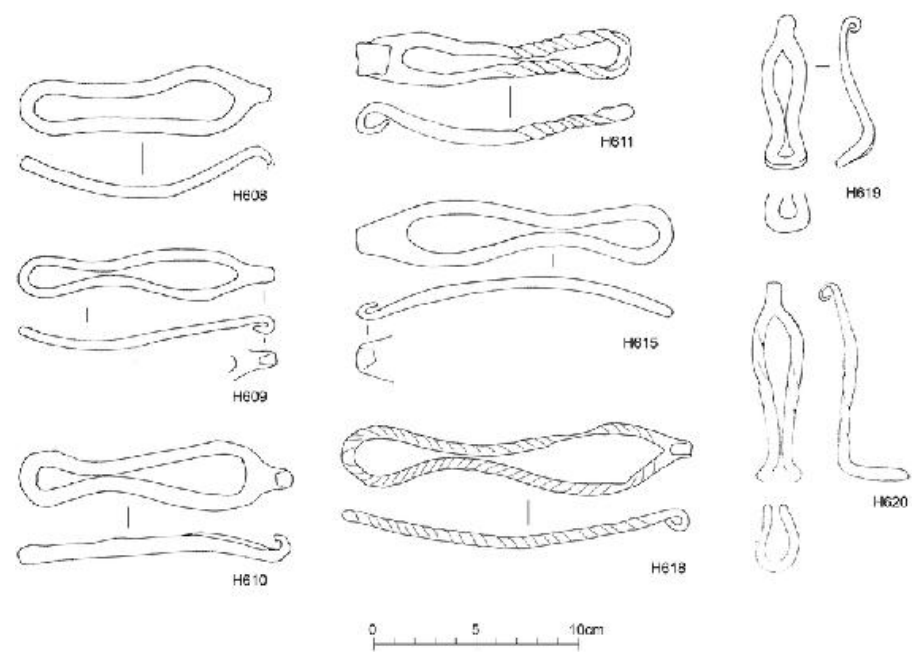



FIGURE 9.28
*Hasps*

**H621 HASP**
Grenstein, Norfolk.
Site: 12th to late 14th, 15th century.
Angled hasp with hooked end. L 109mm.
Goodall 1980c, fig 80, no. 66.

**H622 HASP**
Clough Castle, Co. Down.
*c*1250, from same context as two hinges, two hinge pivots and barrel padlock, all perhaps from same door.
Angled hasp with broken, hooked end.
L 136mm.
Waterman 1954, 140, fig 12.6.

**H623 HASP**
Sulgrave, Northamptonshire.
Second half 11th century, possibly just post-Conquest.
Curved hasp with hooked end. L 144mm.
Excavated by B K Davison.

**H624 HASP**
Lydford Castle, Devon.

Mid 13th century.
Curved hasp with solid centre and hooked end from well cover **H404**. L 158mm.
Goodall 1980b, fig 17.b.

**H625 HASP**
Winchester, Hampshire.
13th century.
Angled hasp with hooked end. L 157mm.
Goodall 1990-19, fig 303.3486.

**H626 HASP**
Winchester, Hampshire.
*c*1065/66–*c*1110.
Angled hasp. L 124mm.
Goodall 1990-19, fig 303.3485.

**H627 HASP**
Wythemail, Northamptonshire.
14th century.
Flat hasp with hooked end. L 115mm.
Hurst and Hurst 1969, 200.

**H628 HASP**
Winchester, Hampshire.
11th–?mid 12th century.
Double angled hasp with hooked end.
L 101mm.
Goodall 1990-19, fig 303.3490.

**H629 HASP**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.
Curved hasp with hooked end. L 119mm.
Excavated by Mrs M Gray.

**H630 HASP**
Glottenham, East Sussex.
Late 13th century.
Pinned hasp with thickened tip. L 78mm.
Excavated by D Martin.

**H631 HASP**
London.
Late 15th–early 16th century.
Incomplete pinned hasp, tip obscured by corrosion. L 126mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**H632 HASP**
Rhuddlan, Clwyd.
Just pre-1280.
Broken hasp with hooked end. L 51mm.
Goodall 1994, fig 17.6, no. 101.

**H633 HASP**
Winchester, Hampshire.
Mid to late 13th century.
Broken hasp with elongated, hooked end.
L 43mm.
Goodall 1990-19, fig 303.3492.

**H634 KEYHOLE PLATE**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Damaged triangular plate. L 99mm.
Butler 1974, 98, fig 9.27.

**H635 KEYHOLE PLATE**
Brandon Castle, Warwickshire.
1226–66.
Triangular plate with shaped top edge.
L 98mm.
Chatwin 1955, 81, fig 11.10.

**H636 KEYHOLE PLATE**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Damaged triangular plate. L 97mm.
Salisbury and South Wiltshire Museum, Salisbury, 30/1920–21.

**H637 KEYHOLE PLATE**
Barrow mead, Somerset.
Site: 13th–14th century.
Rectangular plate, edge damaged. L 53mm.

Goodall 1976b, 35, fig 11.20.

**H638 KEYHOLE PLATE**
Winchester, Hampshire.
15th century.
Elongated oval plate. L 97mm.
Goodall 1990-19, fig 304.3514.

**H639 PLATE**
King's Lynn, Norfolk.
*c*1250–1300.
Broken triangular plate with traces of non-ferrous plating. L 65mm.
Goodall and Carter 1977, 297, fig 134.63.

**H640 HANDLE**
Eynsford Castle, Kent.
Early 12th century.
Side arms broken. W 63mm.
Rigold 1971, 147, fig 10.21.

**H641 HANDLE**
Upton, Gloucestershire.
Late 13th–late 14th century.
Complete. W 92mm.
Hilton and Rahtz 1966, 120, fig 14.25.

**H642 HANDLE**
Effingham, Surrey.
Late 12th to early 14th century.
Side arm broken. W 104mm.
Ruby and Lowther 1955, 14, fig 4.4.

**H643 HANDLE**
Thuxton, Northamptonshire.
Site: 12th–14th century.
Complete. W 133mm.
Excavated by L A S Butler.

**H644 HANDLE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to late 15th century.
Side arms broken. W 123mm.

Goodall 1988, fig 80.91; b orenius and Charlton 1936.

**H645 HANDLE**
Weoley Castle, Birmingham, West Midlands.
*c*1230–70.
Complete. W 163mm.
Oswald 1962, 130, fig 51.11. birmingham
City museum, WC 1115.

**H646 HANDLE**
Writtle, Essex.
1211–*c*1306.
One arm broken. W 153mm.
Rahtz 1969b, 87, fig 48.67.

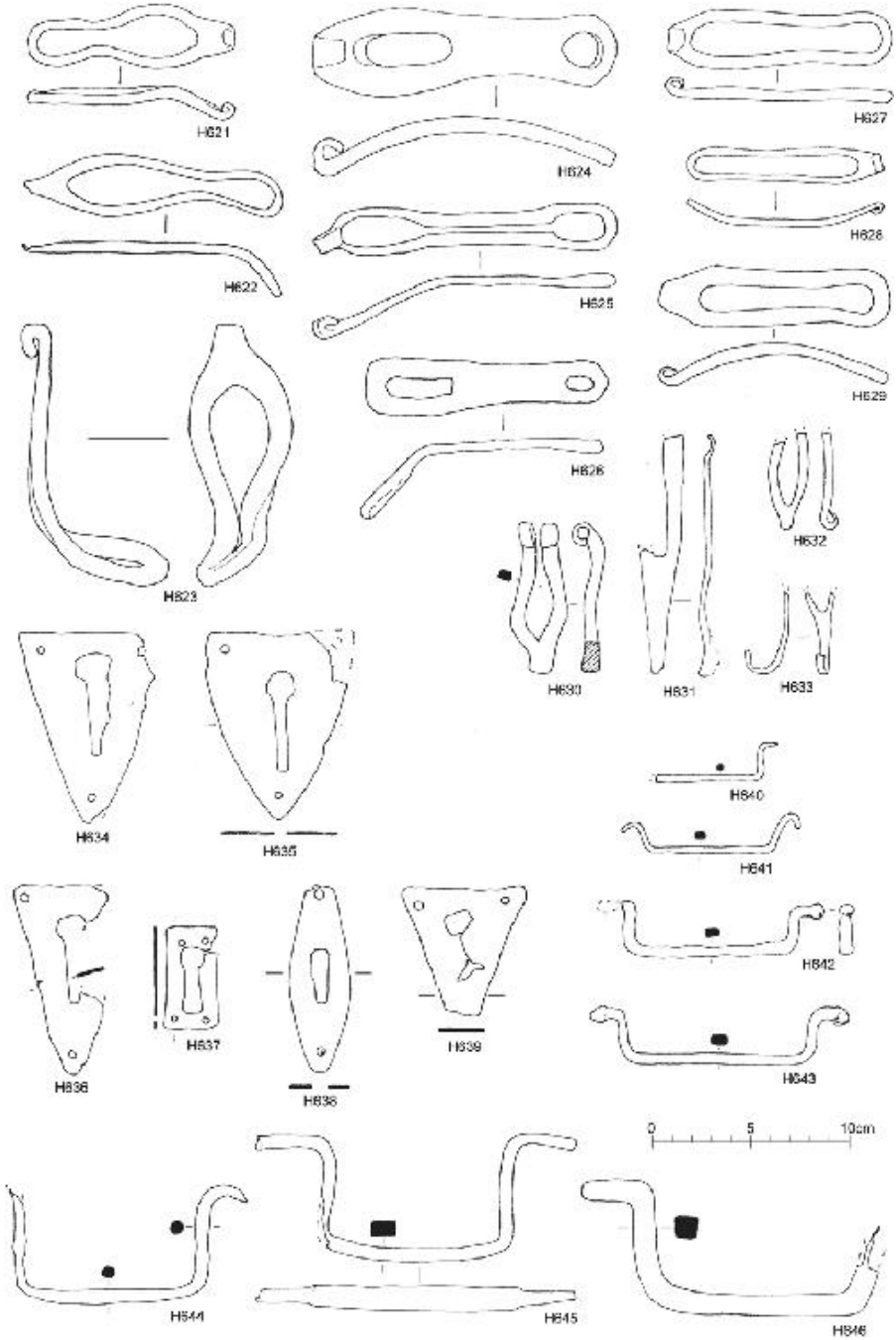



FIGURE 9.29
*Hasps, keyhole plates, and handles*

**H647 HANDLE**
Clarendon Palace, Wiltshire.

Site: *c*1072 to later 15th century.
Complete. W 191mm.
Goodall 1988, fig 80.92; Borenius and Charlton 1936.

**H648 HANDLE**
Winchester, Hampshire.
16th century.
Arms incomplete. W 267mm.
Goodall 1990-19, fig 304.3520.

**H649 HANDLE**
Wallingstones, Hereford and Worcester.
1300–25 to 1500.
Complete. W 132mm.
Bridgewater 1970–2, 104, no. 71.

**H650 HANDLE**
Kilton Castle, Cleveland.
14th century.
Side arms broken. W 117mm.
Excavated by A Aberg.

**H651 HANDLE**
Stonar, Kent.
*c*1275–1385.
Basal strap broken. L 192mm.
Excavated by N Macpherson-Grant.

**H652 HANDLE**
Newbury, b erkshire.
Late 15th century.
Handle and basal strap broken. L 290mm.
Goodall 1997, fig 20, no. 22.

**H653 HANDLE**
Southampton, Hampshire.
1250–1300.
Broken perforated terminals. W 74mm.
Harvey 1975b, 279, fig 251.2008.

**H654 HANDLE**
Southampton, Hampshire.

1250–1300.
Ring with broken U-shaped staple. D 50mm.
Harvey 1975b, 279, fig 251.2012.

**H655 HANDLE**
Hen Domen, Powys.
13th century.
ring with broken looped staple **H166**.
Overall l 64mm.
Higham and Rouillard 2000, no. 59.

**H656 HANDLE**
Brandon Castle, Warwickshire.
1226–66.
Ring partly of twisted section with U-shaped staple **H141**. Overall L 159mm.
Chatwin 1955, 81, fig 11.9.

**H657 HANDLE**
Stonar, Kent.
*c*1275–1385.
Ring and broken looped staple **H170**.
Overall L 145mm.
Excavated by N Macpherson-Grant.

**H658 HANDLE**
Alsted, Surrey.
*c*1250–1405.
Shaped ring and oval link. W 78mm.
Goodall 1976a, 56, fig 36.51.

**H659 HANDLE**
Winchester, Hampshire.
Late 11th century.
Shaped ring and broken link. W 74mm.
Goodall 1990-19, CG 53.

**H660 HANDLE**
South Witham, Lincolnshire.
1137–85 to *c*1220.
M-shaped handle, one arm incomplete.
W 87mm.

Goodall 2002, fig 7.6, no. 66.

**H661 HANDLE**
Eynsford Castle, Kent.
*c*1300.
M-shaped handle. W 90mm.
Rigold 1971, 147, fig 9.20.

**H662 HANDLE**
Writtle, Essex.
*c*1306–*c*1425.
M-shaped handle with non-ferrous platin
W 92mm.
Rahtz 1969b, 85, fig 47.57.

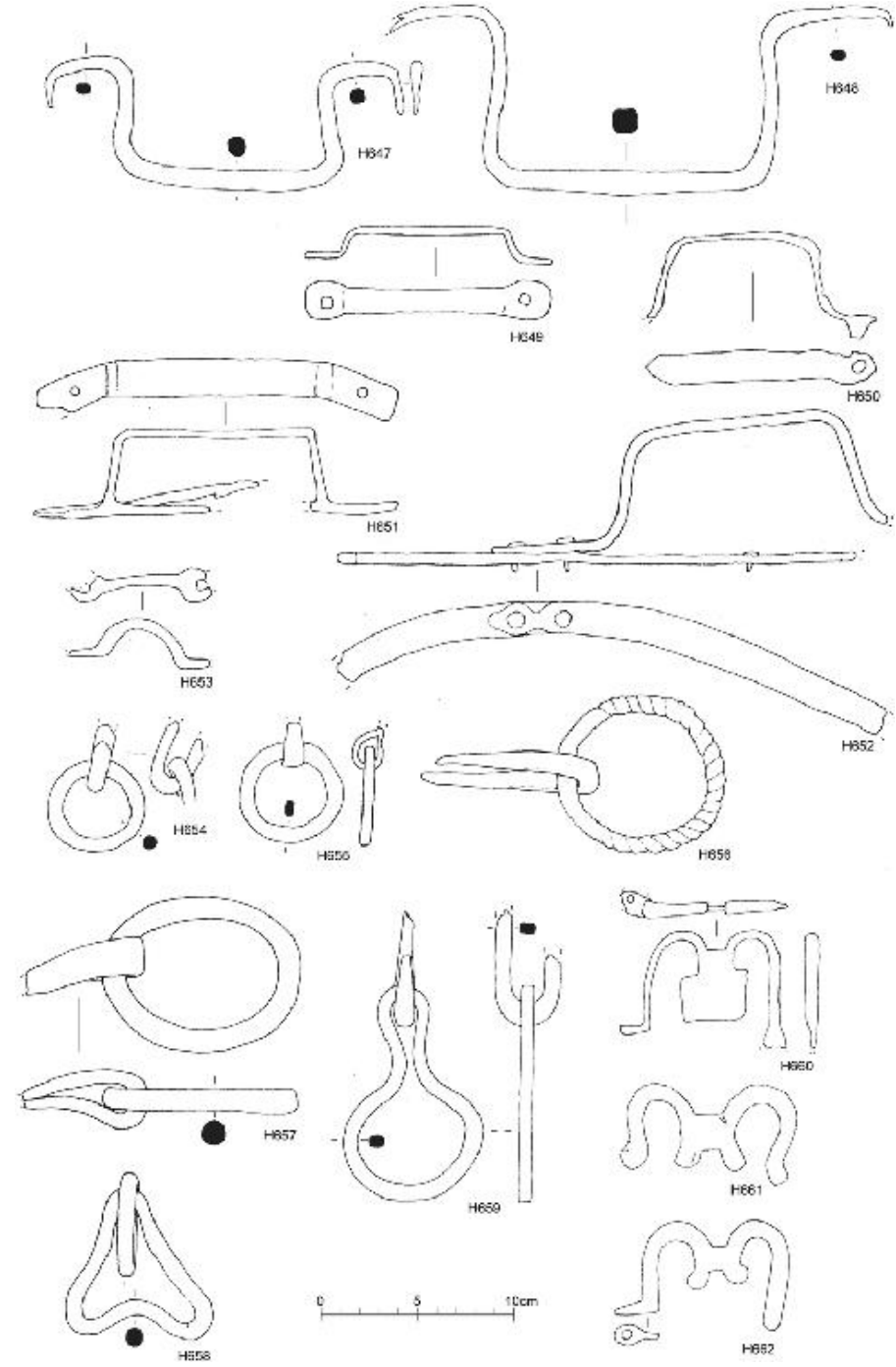



FIGURE 9.30
*Handles*

**H663 LATCH REST**

Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Shank distorted. L 96mm.
Goodall 1988, fig 78.65; b orenius and Charlton 1936.

**H664 LATCH REST**
Alsted, Surrey.
*c*1250–1350.
Shank broken. L 89mm.
Goodall 1976a, 56, fig 34.4.

**H665 LATCH REST**
Wintringham, Cambridgeshire.
Early 14th century.
Shank tip broken. L 119mm.
Goodall 1977a, 257, fig 43.29.

**H666 LATCH REST**
Manor of the More, Rickmansworth,
Hertfordshire.
*c*1426.
Complete. L 150mm.
Biddle *et al* 1959, 185, fig 19.43

**H667 LATCH REST**
Kilton Castle, Cleveland.
Late 15th century.
Clenched tip to shank. L 116mm.
Excavated by A Aberg.

**H668 LATCH REST**
Newbury, b erkshire.
Mid 15th century.
Burred tip, bent shank. L 89mm.
Goodall 1997, fig 20, no. 23.

**H669 LATCH REST**
Castle Acre Castle, Norfolk.
1140s/1150s deposit with derived material.
Site founded soon after 1066.
Complete, angled shank. L 78mm.
Goodall 1982, fig 40, no. 105.

**H670 LATCH REST**
London.
Late 13th–mid 14th century.
Broken split shank. L 49mm.
Henig 1974, 191, fig 39.73.

**H671 LATCH REST**
Winchester, Hampshire.
Late 13th century.
Perforation through base of head, lead caulking on end of shank. L 132mm.
Cunliffe 1964, 154, fig 54.2.

**H672 DOOR FLAIL**
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Flat bar with tapered ends and central rivet hole. L 403mm.
Casey 1931, 252, pl XXXv .6.

**H673 DOOR BOLT**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
One end broken. L 58mm.
Excavated by P J Fowler.

**H674 DOOR BOLT**
Sulgrave, Northamptonshire.
End 11th century.
Probably complete. L 83mm.
Excavated by B K Davison.

**H675 DOOR BOLT**
Wroughton Copse, Fyfield Down, Wiltshire.
13th century (?mid) to early 14th century.
Complete. L 102mm.
Excavated by P J Fowler.

**H676 DOOR BOLT**
Seacourt, Oxfordshire.
14th century.
One end broken. L 128mm.
Biddle 1961–62, 177–179, fig 30.7, scale 1:4, not 1:3.

**H677 DOOR BOLT**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Complete. L 216mm.
Goodall 1988, fig 79.81; b orenius and Charlton 1936.

**H678 DOOR BOLT**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
Incomplete bolt with shaped finger grip decorated with an animals' head. L 130mm.
Dunning 1965, 58, fig 5.

**H679 DOOR BOLT**
Manor of the More, Rickmansworth, Hertfordshire.
*c*1520.
Circular-sectioned bolt with plain finger grip. L 202mm.
Biddle *et al* 1959, 185, fig 20.4.

**H680 DOOR BOLT WITH STAPLED HANDLE**
Winchester, Hampshire.
1141.
Sliding bolt with centrally set, incomplete, cranked stapled handle. Bolt L 152mm.
Goodall 1990-19, fig 304.3513 [Goodall 1980 says COE 3558].

**H681 DOOR BOLT**
Norwich.
In 1509 fire deposit.
Cranked bolt with finger grip and one of tw U-shaped mounts. L 280mm.
Goodall 1993c, fig 113.1207.

**H682 U-SHAPED BRACKET**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Incomplete terminal retains nail. W 83mm Goodall 1988, fig 79.82; Borenius and Charlton 1936.

**H683 HOOK**
Waltham Abbey, Essex.
Well dug *c*1300, filled in late 15th–early 16th century.

Complete. L 137mm.
Goodall 1973a, 171, fig 11.35.

**H684 HOOK**
Southampton, Hampshire.
16th century.
Near complete. L 110mm.
Harvey 1975b, 289, fig 257.2114.

**H685 DOOR HOOK**
Glottenham, East Sussex.
Mid to late 13th century.
Looped hook, incomplete. L 345mm.
Excavated by D Martin.

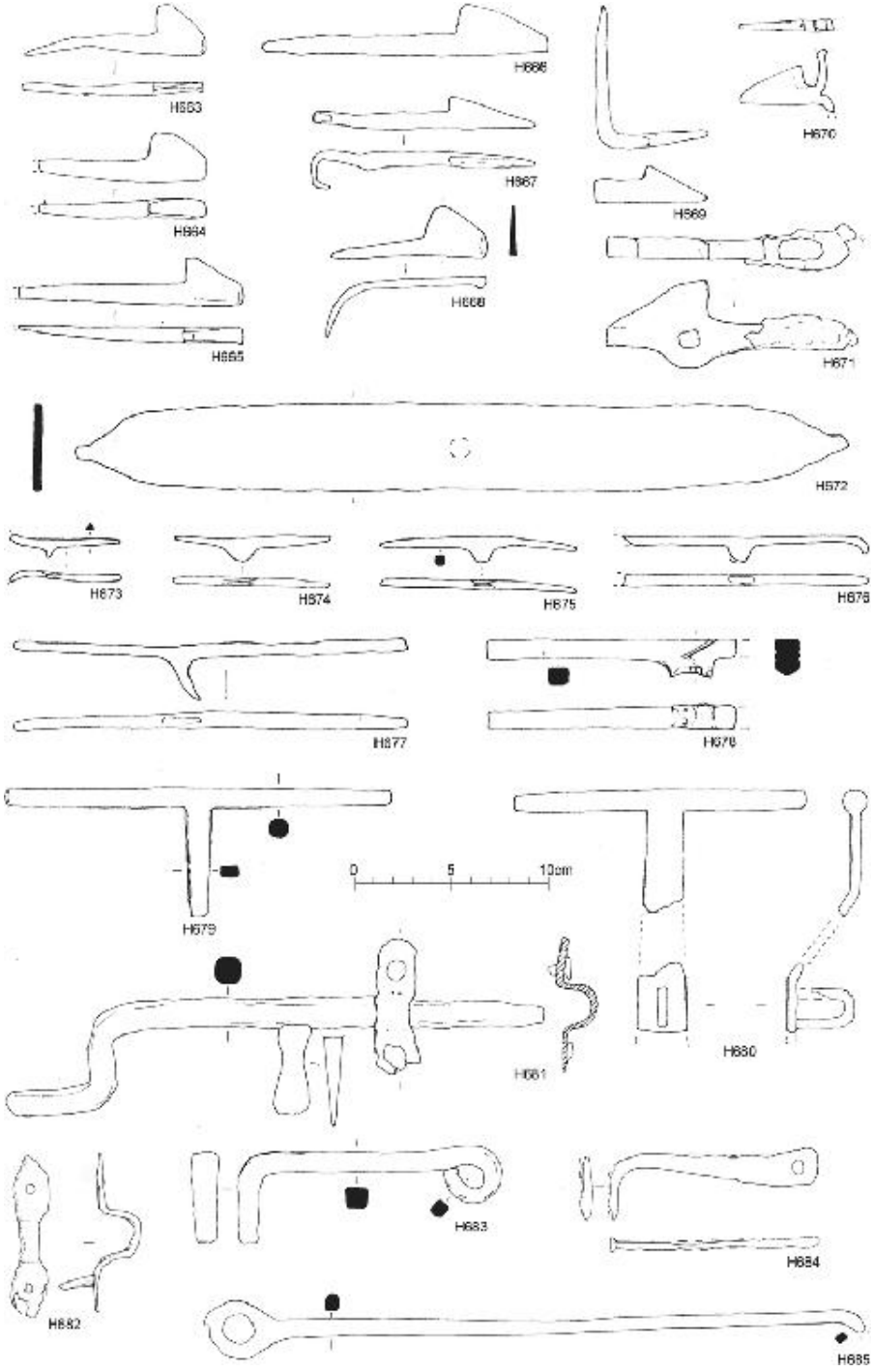



FIGURE 9.31
*Latch rests, door flail, door bolts, U-shaped bracket and hooks*

## H686 GRILLE

Kings l angley, Hertfordshire.
Probably 1388.
Window formed from eight stone blocks with mortices for former iron grille wtih eight horizontal and six vertical bars, and for four hinge pivots, one of which survives.
Neal 1973, 48, fig IX.10.

**H687 GRILLE** (not illustrated)
Weoley Castle, Birmingham, West Midlands.
*c*1270–1380. One of three grilles from moat.
Five horizontal bars, maximum length 883mm, each with four 30 by 33mm holes for vertical rods. The bars have lead caulking at each end, and the longest rod is 1.143m long.
Oswald 1962, 64.

**H688 GRILLE** (not illustrated)
Weoley Castle, Birmingham, West Midlands.
*c*1270–1380. One of three grilles from moat.
Mush distorted grille with four horizontal bars, maximum length 1.080mm, each with five rectangular eyes for vertical rods. The longest rod is 1.448mm long.
Oswald 1962.64.

**H689 GRILLE**
Weoley Castle, Birmingham, West Midlands.
*c*1270–1380. One of three grilles from moat.
Incomplete grille with horizontal bars, maximum length 1.030mm, each with five eyes. Part of one bar drawn, L 270mm.
Oswald 1962, 64.

**H690 WINDOW BAR**
Griff (Sudeley Castle), Warwickshire.
Site: 13th–14th century.
Broken, straight bar with circular eye.
L 217mm.
West 1968, 87, fig 4.9.

**H691 WINDOW BAR**
Kirkcudbright Castle, Dumfries and
Galloway.
Site: *c*1288–1308.
Straight window bar with rectangular eye.

L 348mm.
Dunning *et al* 1957–58, 138, fig 7.3.

**H692 WINDOW BAR**
Kilton Castle, Cleveland.
Late 15th century.
Broken bar with rectangular eye. L 222mm.
Excavated by A Aberg.

**H693 WINDOW BAR**
Ospringe, Kent.
*c*1483 to 1550.
Broken bar with rectangular eye. L 248mm.
Goodall 1979c, 129–132, fig 20.37.

**H694 WINDOW BAR**
Castle Acre Castle, Norfolk.
1140s deposit with derived material. Site founded soon after 1066.
Rectangular-sectioned bar. L 424mm.
Goodall 1982, fig 39, no. 51.

**H695 WINDOW BAR**
Stretham, East Sussex.
Site: 11th century to *c*1450.
Broken, hexagonal-sectioned bar. L 242mm.
Excavated by A Barr-Hamilton.

**H696 WINDOW BAR**
Alsted, Surrey
*c*1250–1350
Broken straight bar, largely of hexagonal section. L 268mm
Goodall 1976a, 56, fig.34.8

**H697 WINDOW BAR**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Stub of bar with lead caulking. L 95mm.
Goodall 1988, fig 77.60.

**H698 WINDOW BAR**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.

Diamond-sectioned bar with flattened ends.
L 400mm.
Goodall 1988, fig 77.61.

**H699 WINDOW BAR**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Broken, rounded section bar with flattened terminal. L 178mm.
Goodall 2002, fig 7.3, no. 32.

**H700–702 WINDOW BARS**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Broken, straight, rectangular-sectioned bars with offset terminals. L 135mm, 150mm, 208mm.
Goodall 1988, fig 77.62–64.

**H703 WINDOW BAR**
Winchester, Hampshire.
14th to mid 15th century.
Terminals broken. L 172mm.
Goodall 1990-10, fig 86.697.

**H704 WINDOW BAR** (not illustrated)
Alsted, Surrey.
*c*1395–1405.
Broken bar and offset terminal. L 75mm.
Goodall 1976a, 60, fig 36.56.

**H705 WINDOW BAR**
Writtle, Essex.
*c*1425–1521.
Straight, square-sectioned bar with angled, perforated terminals. L 358mm.
Rahtz 1969b, 85, fig 47.44.

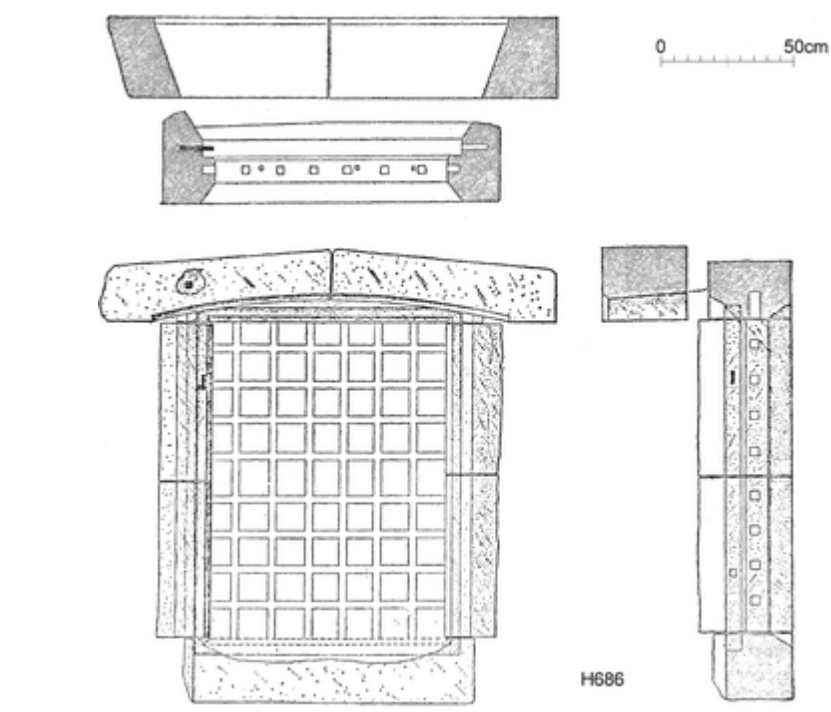



FIGURE 9.32
*Window grille*

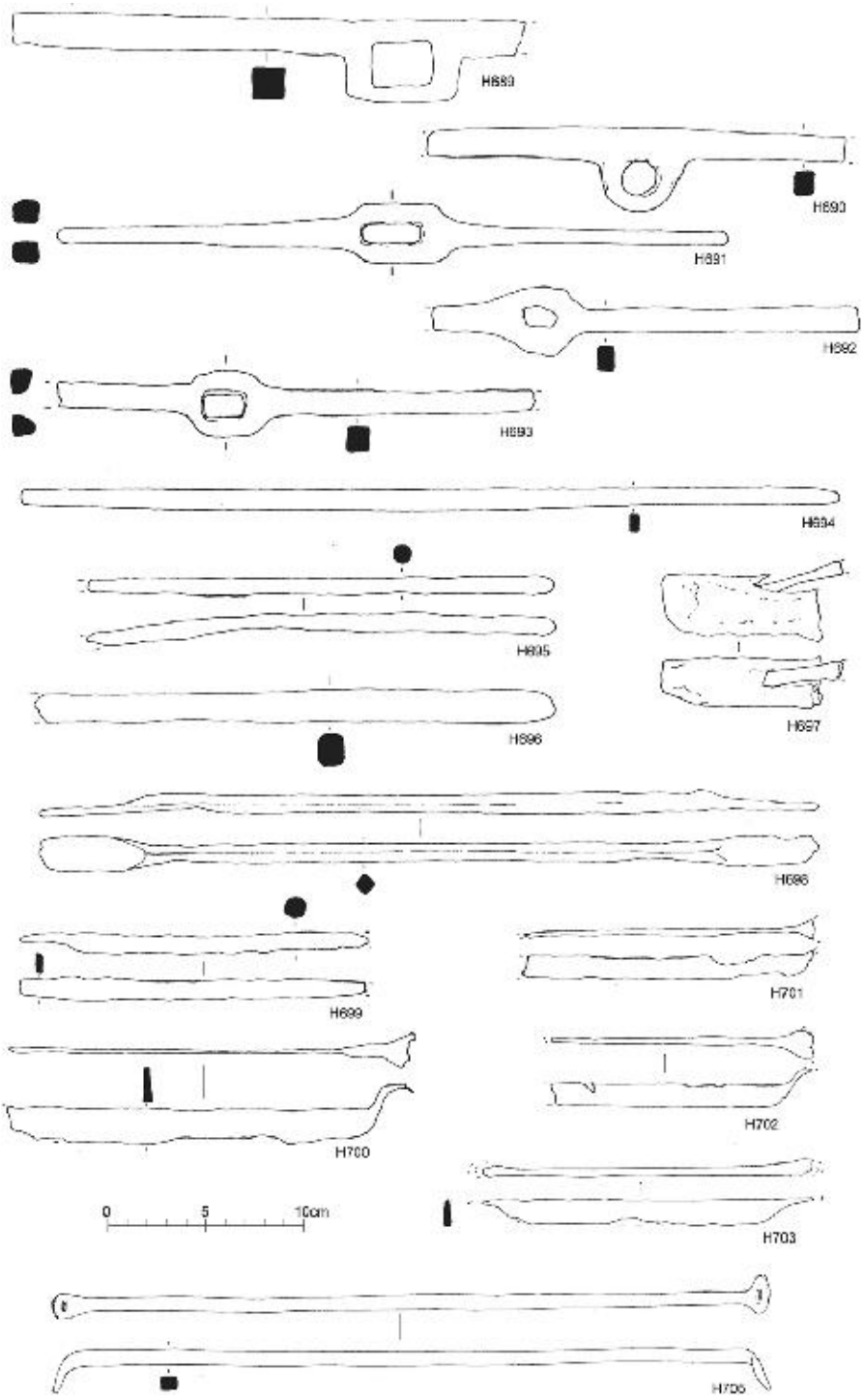



FIGURE 9.33
*Window bars*

**H706 WINDOW BAR**

South Witham, Lincolnshire.

*c*1220–late 13th century.

Nailed strap with seven perforated plates, five retaining nails, riveted to it.

L 620mm.

Goodall 2002, fig 7.4, no. 31.

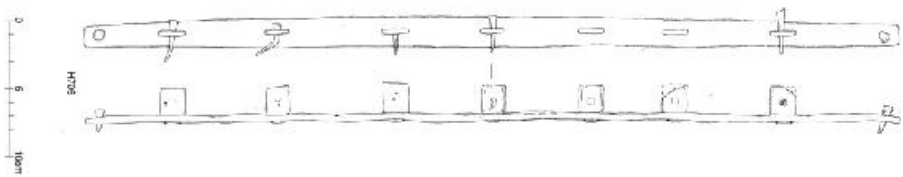


FIGURE 9.34
*Window bar*

# 10
# Locks and Keys

Locks and keys, common but complicated finds, are discussed below in the following major sections: box and barrel padlocks; padlocks operated by revolving keys; locks; padlock keys; keys; miscellaneous keys.

## 10.1 Box and Barrel Padlocks

Medieval box and barrel padlocks generally have rectangular or cylindrical cases and padlock bolts with springs attached to spines. They were opened by padlock keys which passed over the springs, compressing them against the spine and thereby releasing the bolt. The padlock keys had to be of the appropriate type for the padlock and its keyhole, and the bit had to be of the correct shape to pass along the bolt.

### Box padlocks

Box padlocks with rectangular cases are principally of pre-Conquest date, although **I1–3** are incomplete case fragments from medieval contexts. All are of the same basic form with a T-shaped keyhole in one side and a tube on the outer face of the opposite side, and they were used with U-shaped paddock bolts similar to **I4–5** which have rectangular closing plates.

Box padlocks were probably little used after the 11th century. **I3**, although from an early 12th-century context, is from a site occupied since the 8th century, and its twisted rods closely resemble those on a box padlock of probable Viking date from York (Richardson 1959, 81– 83, fig 18.4; full size not 1:2). **I5** is probably residual in its context, and **I1–2** are from a castle erected immediately after the Conquest and occupied until about 1350.

### Barrel padlocks

The barrel padlock was the most common type of medieval padlock, and five

types (A–E) may be isolated, some capable of further subdivision according to the form and position of the keyhole (Figure 10.1).

## *Type A. Barrel padlocks with attached tubes*

This type of barrel padlock has a case to which the tube is directly attached, and it can be divided into Types A1 and A2.

— Type A1 has a case with strengthening rods between the end plates, and **I6** is the only example. It has twisted rods along an otherwise plain case, and lozenge-shaped end plates.

— Type A2 is similarly constructed, but in addition it has pivoting fins set between the end plates. **I7** is the only complete medieval example, and its plain case is strengthened by plain rods. **I8–10** are individual pivoting fins of flattened triangular shape. Barrel padlocks **I6–7** both have keyholes in one end plate and holes for the U-shaped bolt in the other.

Type A barrel padlocks are known from pre-Conquest contexts, and they probably did not continue in use much, if at all, after the 12th century.

## *Type B. Barrel padlocks with fins and tubes*

This type of barrel padlock, one of the most common medieval types, has the case and tube separated by a rectangular or trapezoidal fin. It can be divided into three types according to the position of the keyhole.

— Type B1. Barrel padlocks **I11–19** have a keyhole in one end plate, the other having holes for the entry of the U-shaped bolt. The barrel padlocks vary in length from 29 to 79mm, and all are decorated, most frequently with longitudinal rods and straps, but occasionally with projecting longitudinal straps. **I16** retains its broken key **I238**.

Type B1 barrel padlocks of iron are known from medieval contexts up to the 14th century, and a 14th-century copper-alloy example comes from walsall Manor, Staffordshire (wrathmell and w rathmell 1974-75, 49, fig 17.1).

— Type B2. Barrel padlocks **I20–21** have T-shaped keyholes which cut across the end plate and underside of the case. Their cases have longitudinal straps and rods, and are from 12th to 14th-century contexts.

— Type B3. Barrel padlocks **I22–35** have a T-shaped keyhole along the underside of the case. The keyhole is generally a plain opening, as on **I28**, **I31** and **I34**, but on 122–23 and **I29–30** there are cheeks along each side. Those on **I22** are perforated, as also is the fin. Seven of these barrel padlocks have cases with longitudinal and transverse straps, and all but one of the remainder have at least longitudinal straps.

Type B3 padlocks are known from medieval contexts up to and including the 15th century.

A number of barrel padlock fragments incapable of precise classification but of intrinsic interest are known. **I36–38** are case fragments with longitudinal rods, **I39-42** complete fins and tubes of differing size and form. **I39** has wavy line decoration, **I40** is plain, **I41** has a strap and **I42** is perforated.

## *U-shaped padlock bolts*

U-shaped padlock bolts were used with box padlocks and with barrel padlocks of Type A and B. Rectangular or rounded closing plates, where present and recognisable, generally indicate the type of padlock from which the bolts come, but otherwise the context date is a guide. Padlock bolts of 12th-century and later date, unless residual, are unlikely to be from box padlocks, and those of 13th-century and later date are most probably from Type B barrel padlocks.

Padlock bolts, as the surviving barrel padlocks indicate, can have between one and four spines, each with springs, as well as additional rods to increase their complexity. **I43–49** have single spines, most retaining double leaf springs, and of these **I43–45** form a small group of 13th to 14th-century date which have expansions at the head of the spine and an equivalent step on the free arm, where this survives. **I46** has this latter step but no expansion, and it would seem that both features are alternatives to closing plates. **I47** has probably lost its closing plate, which **I48** and **I49** retain. **I48** is unusual in having copper-alloy rather than iron springs.

**I50–54** are bolts with double spines arranged in differing ways, all with closing plates. **I55–62** have three spines, although most are incomplete, and **I63** four spines. A feature common to a number of these padlock bolts is the scrolled decoration applied immediately above the closing plate, which ranges from the simplicity of **I52** or **I57** to the complexity of **I58**. **I64** is a scrolled bolt fragment.

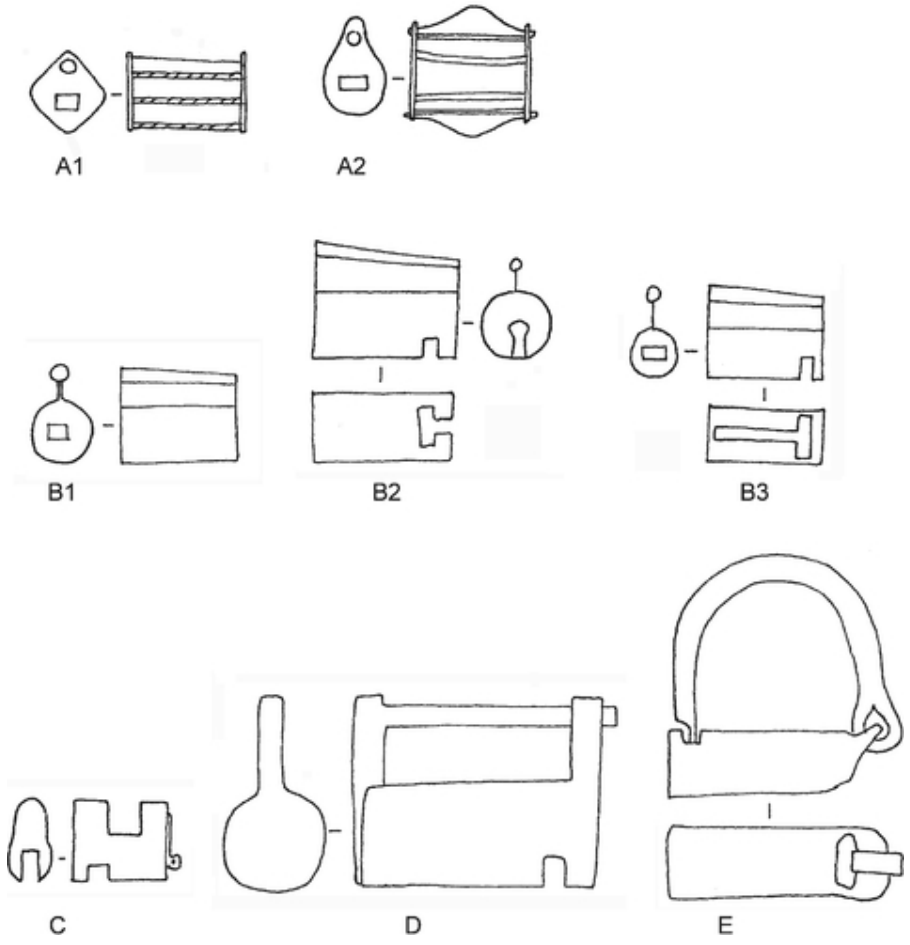



FIGURE 10.1
*Types of medieval barrel padlock*

The method of forging padlock bolts with multiple spines normally involved splitting the spring arm and drawing it out into two spines, and then either brazing the third spine onto the outer or inner edge of the bolt (**I56–57**) or attaching it directly to the main curve of the bolt (**I58**). The latter technique was employed for the two additional spines on **I63**. The scrolled decoration, normally made from iron strip, was also brazed into position and the whole padlock bolt sometimes plated with copper alloy.

## *Type C. Barrel padlocks with U-shaped housings*

Barrel padlocks **I65–72** have cases with inverted U-shaped housings set at each end to house the flat arm of the bolt, itself of a squared U-shape. This

arrangement provided a small rectangular opening through which to pass a chain or staple. The compactness of the arrangement was probably intended to give security, and the padlocks must have been difficult and complicated to forge. A gold padlock of this type, only 15mm long and its case rectangular rather than rounded in section, was found with its bolt and key in a hoard of jewellery probably deposited early in 1464 at Fishpool, n ottinghamshire (Cherry 1973, 312–313, pl LXXXVId).

The cases of these iron barrel padlocks are generally plain, only **I65** being decorated, and all have keyholes in an end plate. The padlock bolts have two or three spines, **I65** three additional rods.

Type C barrel padlocks broadly come from 12th to 15th-century contexts.

## *Type D. Barrel padlocks with L-shaped arms*

Barrel padlocks with L-shaped arms over which a looped, L-shaped padlock bolt fitted are found as commonly in copper alloy as in iron, although the former are generally small in size. **I73–79** are iron barrel padlocks or bolts; those of copper allow are listed below.

Three iron barrel padlock cases survive, **I73** and **I74** plain, **I75** decorated, and the bolts of **I74** and **I75** respectively plain and decorated. **I78** is another bolt with decorative scrollwork, although more restrained in form. These padlock bolts are of two types, most with circular closing plates, but **I76** and **I79** without them. The cases of **I73** and **I74** have keyholes in the end plate, that of **I75** a T-shaped keyhole across an end plate and the underside of the case.

Type D barrel padlocks of both iron and copper alloy are found in 12th to 16th-century contexts. Copper-alloy barrel padlocks of Type D:

— winchester, Hampshire. 1100–25. Broken zoomorphic case. L: 31mm (Goodall 1990-21, BS 4623),
— Norwich, Norfolk. First half of the 13th century. Case. L: 39mm (Hurst 1963, 169, fig 14.8),
— Goltho, Lincolnshire. 13th–mid 14th century. Case. L: 27mm (Goodall 1975a, 93, fig 44.21),
— Rayleigh Castle, Essex. Around 1070–1350. Case retaining iron springs from bolt. L: 32mm (Reader 1913, 163–164, pl B1),
— Old Sarum, w iltshire. Principally medieval, to 14th century. Bolt. L: 32mm. Salisbury and South w iltshire Museum, Salisbury, OS C47,
— Brome, Suffolk. Late in period, late 12th to mid 14th century. Bolt. L: 53mm (west 1970, 112, fig 13.21),
— Winchester, Hampshire. 14th century. Case and bolt with iron spines

and springs. L: 33mm (Goodall 1990-21, BS 490),

— Northampton. 15th century. Case. L: 33mm (Goodall 1978c, 149, fig 22.2),

— St Helen's, Isles of Scilly. 11th–15th century. Bolt. L: 70mm (Dunning 1964, 66, fig.7.3).

## *Type E. Barrel padlocks with shackles*

Barrel padlocks with shackles were primarily intended to secure and restrain limbs, both human and animal, although their sturdy construction and ease of use led to their having a general purpose use as well. Salzman (1967, 303), for example, records the provision at Collyweston in 1500 of 'horse lokes for the garden yattes'. This type of barrel padlock has an end-looped, curved shackle with an expanded end perforated to allow the passage of a padlock bolt, and in use the expanded end of the shackle passed through a slot in the upper side of the padlock case and was secured within it by a T-shaped bolt.

**I80** and its almost identical pair **I81** are complete limb shackles with padlock, chain and shackle. None of the others, **I82–93**, is as complete although **I82**, **I83**, **I86** and **I90** retain their bolts and **I83** and **I90** also their keys, **I251** and **I285**. **I90** was found with a leg bone through

the shackle. The padlock cases of **I80–93** are all plain, or at most have broad straps around the lower half to strengthen the case without chafing entrapped limbs. All have, or had, keyholes in the end plate below the end loop of the shackle, some of them extending slightly into the underside of the case. The cases have no fixed bolt entry end plate since the expanded and perforated end of the shackle served its function.

**I94** is a broken shackle from a Type E barrel padlock.

Many T-shaped padlock bolts of the type used with these barrel padlocks are known, and a selection has been catalogued. **I95–96** have single spines, one with a double leaf spring, the other with four springs, and **I97–I05** all have two spines. **I106**, the closing plate from a bolt with two countersinkings for spines, is from the forge at w altham Abbey, Essex, and may be an incomplete forging. **I107–117** have, or had, three spines, and **I118** has two spines, each with double leaf springs, and two rods.

T-shaped padlock bolts must have been difficult to hold during the opening and closing of the padlocks, and several have looped handles, those of **I96** and **I102** welded to the rim of the closing plate, while **I100–101** and **I109–110** have loops made by drawing the end of the spine out and round.

Type E barrel padlocks are found throughout the medieval period.

## *Indeterminate barrel padlock fragments*

**I119–123** are unclassifiable barrel padlock fragments of intrinsic interest for their decorative treatment. **I124** is part of the spine and spring of a bolt with an inverted U-shaped fitting recalling that of **I48**.

## *Barrel padlocks: discussion*

Five main types of barrel padlock can be isolated, and of those Type B and E are the commonest. Type E, the more popular of the two, is the only type which was used in any quantity throughout the medieval period, since its form suited its principal use of shackling animals and people. Type B barrel padlocks, however, which are infrequently found after the 14th century, are more likely to have been used on doors and chests and to have been replaced by fixed locks. Types A, C and d are represented by relatively few barrel padlocks. Type A with its attached tube is clearly related to the box padlock, and like it, it only just continued in use into the medieval period. Types C and d are more specialised types, the latter as commonly made in copper alloy as in iron, and both have broad date ranges.

Barrel padlock cases are sometimes plain, but most have decoration of some sort, much of it probably originating as a by-product of the method of assembly. **I30**, for example, consists of a cylindrical case, two end plates, a rectangular fin and a tapering tube, all brazed together. Straps also bind the case and end plates, and tube and fin, and the decorative straps are an extension of these, strengthening and decorating the case.

The decoration on padlock cases is related to their type, size and date. Plain cases are most frequently found on barrel padlocks with shackles (Type E), which are plain on at least their upper surfaces to avoid chafing limbs. The other plain cases are mainly restricted to small barrel padlocks of Types C and D.

Thirteen barrel padlocks of 11th to 14th-century date have rods along their cases. On **I6–7**, both of Type A, they run between shaped end plates and are clearly part of the padlocks' construction, but on the other eleven, all of Type B, they are principally a decorative feature. They are almost invariably plain, although those on **I6** are twisted.

Straps along padlock cases may serve either to cover the butted edges of the sheet iron case or act as flanges securing the base of a fin in place. Thirteen barrel padlocks have flat straps along the sides of their cases, and some may be considered to be decorative. They are generally applied to otherwise plain

cases, although **I12** and **I28** are corrugated, and **I24**, **I35** and **I119** have additional wavy decoration in some panels. These flat side straps are found throughout the medieval period, but the four barrel padlocks with projecting side straps (**I14**, 116, **I33** and **I122**) are all of 13th to 14th-century date and, where sufficiently complete, of Type B. A type of decoration combining longitudinal and transverse straps is restricted to seven examples of Type B, principally of 11th to 13th-century date.

Decoration was not restricted to padlock cases, and several Type B barrel padlocks have decorated fins. **I39** has wavy line decoration, **I41** a longitudinal strap, and **I22**, **I28** and **I42** are perforated. The perforations on **I22** are extended to the cheeks beside the keyhole.

The various types of barrel padlock were used with their own specific type of padlock bolt, and these have been shown to have between one and four spines. A number of bolts, including **I113** and **I118**, and those with padlocks **I34**, **I65** and **I75** have rods which never held springs but instead served to complicate the lock. Several, including **I48**, **I98** and **I124**, have extra fittings or straps attached to the spines.

Examination of two T-shaped padlock bolts from Goltho (**I110–111**) explained their method of assembly. Many padlock bolts are shown, by their drawings, to have riveted spine tips, and **I111** was proved to have had holes punched or drifted through them prior to riveting. o ne spine on **I111** was shown to have been drawn out from the closing plate, but another on **I110** had been inserted in a hole and brazed into place. The latter method of assembly is simpler and was probably more generally used since a number of incomplete bolts, including **I106**, have holes for spines. A number also have these spines drawn out and bent round into handles to enable them to be inserted and withdrawn more easily.

## 10.2 Padlocks Operated by Revolving Keys

### Padlocks with separate bolts

**I125** is a padlock case which originally had a U-shaped bolt opened by a revolving key. It is from a 12th to 14th-century context and is related to earlier box padlocks opened in a similar way from Birka, Sweden (Arbman 1940, taf 273, 6a–c), and to later medieval box padlocks with hinged shackles. Its case shape with fin and tube is similar to contemporary Type B barrel padlocks, and

its wavy line decoration also has medieval parallels.

## Padlocks with hinged shackles

Padlocks with hinged shackles and sliding bolts operated by a revolving key were introduced during the late medieval period and became popular during the post-medieval period. Medieval examples **I126–128**, from 15th to 16th-century contexts, all have plain rectangular cases with U-shaped shackles hinged within the case. **I129–130** are hinged shackles found independently of their padlocks.

The keyholes and internal mechanism of **I127** is not clear, but **I126** and **I128** have keyholes in one long side. **I126** has a circular mount on the inner face of the opposing side to receive the key tip, while **I128** has a hole in the case side to receive it. In use the key bit had to pass a U-shaped spring-cum-ward before sliding the L-shaped bolt out of a recess in the inner edge of the shackle tip and thus freeing it.

## Embossed padlocks

**I131–141** are embossed padlocks with flanged rectangular cases and U-shaped stapled hasps which were not fixed to doors or items of furniture, despite their appearance, but instead hung freely in the manner of all padlocks. They have flat rectangular backplates and dished cases housing the lock mechanism, the two parts riveted together through a narrow flange with rivets either at each corner (**I131** and **I138**) or all round the case (**I139** and **I141**). The rivets sometimes have raised heads, as on **I141**, but these are merely decorative and are not from larger studs which fixed the padlock in position.

The stapled hasps used with these padlocks are of a round or flat-headed U-shape, and they have a tapering straight arm which passed vertically through the case and acted as a pivot. The other arm is angled to fit over the outer face of the case. None of the tapering straight arms is complete, and it is impossible to know therefore whether they could be completely withdrawn from the case when not locked, or whether they had clenched tips which retained them within the case, as on an 18th-century embossed padlock from Louisbourg, Canada (Dunton 1972, 116, fig 77.13).

Two types of embossed padlock were in use during the medieval period, one with a sliding bolt and the other a pivoting bolt, each with its appropriate hasp:

— Type 1 has a toothed bolt which operated by sliding in and out of the d -shaped staple of the hasp. **I131–132** are variously incomplete padlocks of this type, **I133–137** the stapled hasps.

— Type 2 has a pivoting bolt, looped at the fixed end with its tip crossing the hole for the staple of the hasp. **I138–139** are near complete padlocks of this type, the latter retaining its hasp; **I140** is an isolated hasp with the characteristically shaped solid staple with a recess to accommodate the bolt. **I141** is an embossed padlock which has yet to be X-rayed and classified.

Embossed padlocks were opened in the same way as padlocks with hinged shackles, the key revolving in the case and passing all wards before moving the bolt and locking or unlocking it. The sloping edge of staple **I140** would have enabled the padlock to be snapped closed against the pivoting bolt without the use of a key, but the hasps with D-shaped staples must all have required keys for both opening and closing.

Embossed padlocks are of late medieval date, Type 1 probably being introduced during the late 13th or early 14th century, and Type 2 probably during the 15th or 16th century.

## 10.3 Locks

Medieval documents record purchases of clicket locks, plate-locks and stock-locks (Salzman 1967, 301–303), all different types of fixed lock used on doors to buildings and on items of furniture. The plate-lock appears to have had the lock mechanism attached to a visible plate, and the stock-lock to have had it set in a block of wood on the door.

Medieval locks may be divided into two types, Type 1 having a sliding bolt which engaged in one or two stapled hasps, Type 2 having a sliding bolt which engaged in a keeper or staple independent of the lock. Both types of lock worked according to the same principles, differing only in the positioning and shaping of individual components.

Figure 10.2, based on **I146**, shows the method of opening a lock. It shows the lock initially closed, but the stale of the hasp has been omitted from around the bolt end for clarity. The key was first inserted, its tip locating in a hole in the mount (A) which also has a collar on its inner side. It was then turned, and cuts in the bit enabled it to pass the collar (B), L-shaped ward (C), and cross-shaped wards (d ) before lifting the tumbler (E) and sliding the bolt (F) open. The tumbler pressed against the upper projection on the lock bolt when closed, but apparently merely rested on top of it when open. In opening and closing,

the lock key bit pressed against one or other of the inner sides of the two lower toothed projections of the bolt.

## Type 1

Locks with straight or hooked sliding bolts which engaged in one or two stapled hasps respectively.

— Type 1a. This, the most common type of pre-Conquest lock, was operated by keys with projection on their bits and had spring-held sliding bolts with horizontally enlarged and perforated centres set on a flat lockplate. A few keys (**I296–303**) of appropriate type are known from medieval contexts, but they probably barely outlasted the 11th century. n o medieval example of this type of lock is known, although earlier ones are discussed by Almgren (1955, 33–40), and one from a late 9th-century context comes from w inchester, Hampshire (Goodall 1990-21, CG 281.37).

— Type 1b. **I142–145** are flat lockplates with the lock mechanism attached to the rear face. **I142** and **I145** are the most complete, and both have holes for the staples of two hasps which were held closed by the ends of hooked sliding bolts. Both bolts slide in U-shaped staples, and are held in place by springs. **I144** has a straight bolt, and **I143** holds a small looped hasp **H565** against the fragmentary lockplate.

— Type 1c. o ne example of a lock with the mechanism attached to the inner face of a dished or embossed case, is known (**I146**). The lock was nailed to the front of a wooden door or item of furniture and held closed by a hasp with an angled stapled arm such as **H572** or **H574**. The lock has a hole for one hasp and a damaged keyhole, and its operation is described above and illustrated in Figure 10.2.

## *Components from Type 1 locks*

Locks are made from a number of components riveted or brazed together, and these are occasionally found separately. **I147** and **I148** are key tip mounts, **I147** plain but **I148** with two concentric collars on the inner side. The key mounts on locks **I128–129** have single collars. **I149 –152** are sliding bolts, **I149** straight and used with a single stapled hasp, **I150–154** hooked and used with two stapled hasps. The cranked ends of **I150–151** enabled the two stapled hasps to

be level on the front of the chests that they probably come from, unlike those used with **I142** and **I145**. **I149** is similar in size to the bolts on locks **I145 –146**, and could be from a lock of either Type 1b or 1c. **I150–152** are much larger, however, and can only be from the flat lockplates of Type 1b. **I153** is the incomplete spring from a lock which in use, as on **I142** and **I145**, pushed against the top of the bolt and kept it in place.

## Type 2

Locks of Type 2 have bolts which engaged in a staple or other keeper outside the lockcase. No complete example is yet known, but a number of the individual components, bolts, tumblers and wards, are known.

**I154–166** are lock bolts, the more complete ones having two lower projections and generally one upper notch or projection, **I166**, however, has two upper projections. In operation the key of the lock struck the inner side of one or other of the lower projections, thereby throwing the bolt and either locking or unlocking it. The upper projection acted as a stop against which the tumbler rested when the lock was closed, preventing it being forced open by pressure. The double upper projection on **I166** suggests an arrangement found on post-medieval locks whereby the bolt was held firm when both locked and unlocked (Nöel Hume 1970, fig 77a).

Lock bolts **I154–163** are generally slightly tapered, and thicken towards the outer end. **I164–166** are of similar width throughout, although the inner end is turned through a right angle as if to act as a stop. These latter bolts more closely resemble those found in post-medieval locks (Nöel Hume 1970, fig 77a, b), and they may be a late medieval development of the lock bolt.

**I167–168** are tumblers which had to be lifted clear of the top of the bolt by the key before some locks could be opened. **I146** has one in position.

Wards **I169–177** were set in locks to act as barriers which the key bit had to pass, and in locks of Type 2 they were set between side mounts as in extant post-medieval locks (Nöel Hume 1970, fig 77b). **I170** has shaped ends to fit such mounts, but the others are plain. **I169 –175** are plain wards which would only require a straight cut in the key bit, but the pin on **I176**, perhaps originally balanced by another now missing, and the collar on **I177**, would have required additional ward cuts. Most of the wards are from 15th to 16th-century contexts.

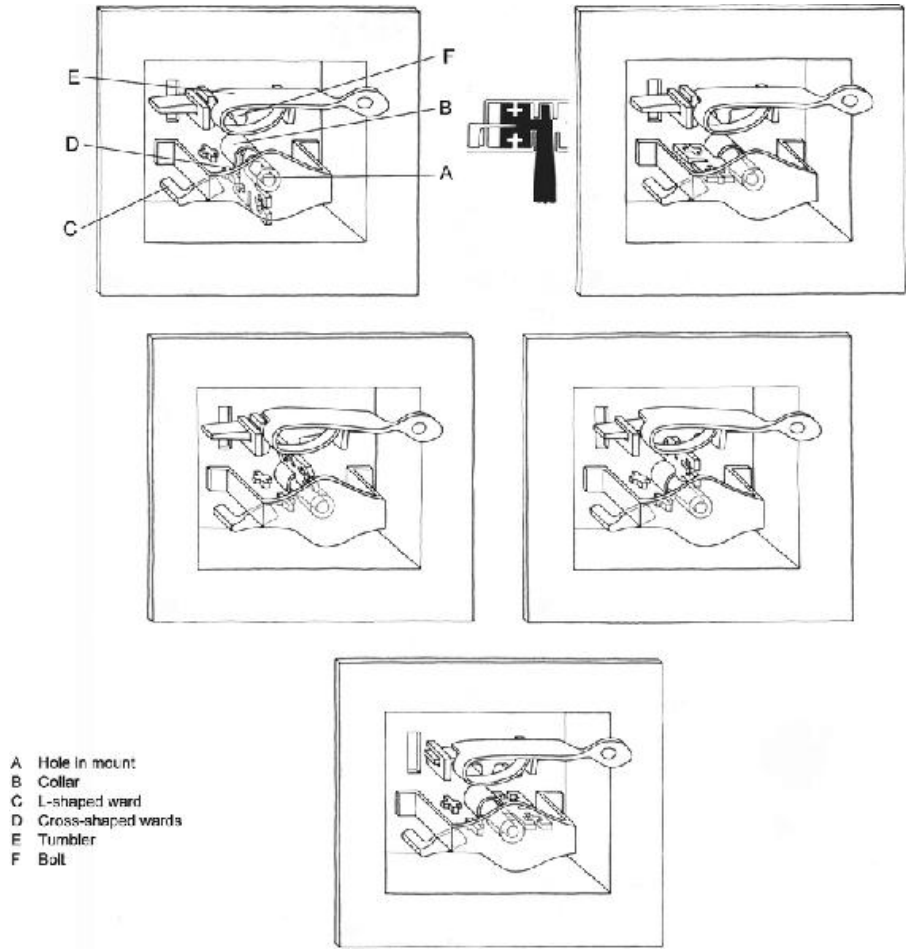



FIGURE 10.2
*Diagram showing operation of lock **1146** (after original drawing by D V Hyde)*

## 10.4 Padlock Keys

Box and barrel padlocks with bolts with leaf springs attached to the spines (**I1–124**) were opened by drawing or pushing padlock keys along the springs, compressing them and ejecting the bolt. These padlock keys may be divided into five types (1–5) according to the form and position of the bit in relation to the stem, and some can be further subdivided (Figure 10.3). Box padlocks were probably little used after the 11th century, and most of the keys described must have been used with barrel padlocks.

## Type 1

Padlock keys with bit, stem and terminal in line.

Padlock keys of this type (**I178 –205**) were inserted into the case and drawn along the bolt, and could only have been used with padlocks with T-shaped keyholes completely in one plane. They could, therefore, have been used with boxed padlocks and certain Type B and C barrel padlocks, but not with any of Types A, d or E. They may be subdivided into Types 1a–d.

— Type 1a. Padlock keys **I178 –183** have plain stems, **I181** with a projection immediately above the bit which may have helped to guide the key along the keyhole. All the bits have unbroken outer edges and holes within them to pass the springs of the bolt. The looped terminals are both rounded and lozenge-shaped.

— Type 1b. Padlock keys **I185–202** have swollen stems, eight with spirally inlaid non-ferrous plating, and the remaining eight plain. The wire on **I188** and **I191** has been identified as copper alloy. The looped terminals are either rounded or lozenge-shaped, and **I189**, **I193** and **I197** retain rings. The bits have unbroken outer edges except on **I202**.

— Type 1c. **I203** has a hooked terminal and simply decorated swollen stem.

— Type 1d. Padlock keys **I204–205** have short stems which flatten and expand to a perforated tip. **I204** has a simple decoration, **I205** a small projection on the stem.

Type 1 padlock keys mainly come from 11th to 13th-century contexts, and those of Type 1b, with their swollen stems, are the most common. The bits generally have unbroken outer edges and internal holes to pass over the bolt springs, only **I202–203** have side cuts. This shaping reflects the form of the bolts in use. The looped terminals of Types 1a and 1b are forged in with the stems, and are either in the same plane as the bit or at right angles to it.

## Type 2

Padlock keys with wards radiating from the base of the stem.

Padlock keys **I206–212** are of Type 2 and could have been inserted through a keyhole either in the end plate or across the end plate and underside of a padlock. They are therefore capable of being used with certain of the barrel padlocks of Types A–D. There are two variations of Type 2 with either looped

or hooked terminals:

— Type 2a. Padlock keys **I206–210** have looped terminals and plain stems, **I208** unusually with a double-looped terminal. The stems are of rectangular section, and on **I207** this thins down just below the handle in part to act as a stop.

— Type 2b. Padlock key **I211** has the expanded stem and hooked terminal more normally found on padlock keys of type 4 and 5, but its bit has radiating wards.

**I212** is a stem and bit fragment, probably originally of Type 2a.

Type 2 padlock keys, represented by seven examples, come mainly from 12th to 13th-century contexts. The wards radiating from the base of the stem are generally symmetrical, and those on **I209** and **I212** are each forged round in an unusual way.

## Type 3

Padlock keys with elongated sheet metal bits in line with the stem.

This type of padlock key was used with keyholes set in end plates, and it could therefore have been used with certain barrel padlocks of Types A–D. The restricted date range of the British and Continental examples, which include a gold key found with its padlock, suggests nevertheless that it was mainly used with Type C barrel padlocks.

**I213**, the only Type 3 iron padlock key so far identified from Britain, has a sheet metal bit with thin strips of iron brazed down two sides of a central sheet and a closing plate between it and the stem. The bit occupies about two-thirds of the length of the key, a similar proportion to those on keys from the Continent which all have looped terminals, one combined with a bulbous stem identical to **I213**, the others with longer plain or swollen stems.

**I213** is from a 14th-century context, and Continental iron parallels include one from Naesholm Castle, d enmark (La Cour 1961, 132, fig 49.n .806) occupied *c*1240 to 1340–46, some of 13th to 14th-century date from Lund, Sweden (Blomqvist 1940, 100, figs 20–23), and three from the mass graves at w isby, Sweden, of 1361 (Thordeman 1939, 129–130, fig 149.1–3).

A gold Type C barrel padlock, 15mm long, has a Type 3 gold key attached by a chain to its bolt. It comes from a hoard of medieval jewellery from Fishpool, n ottinghamshire (Cherry 1973, 312–313, pl LXXXVId) which was probably deposited in the early months of 1464. The key is of a squared U-shaped section.

## Type 4

Padlock keys with laterally set bits with radiating wards.

This type of padlock key, represented by **I214 −241**, could be pushed along the bolts of barrel padlocks with keyholes in the end plate or across the end plate and

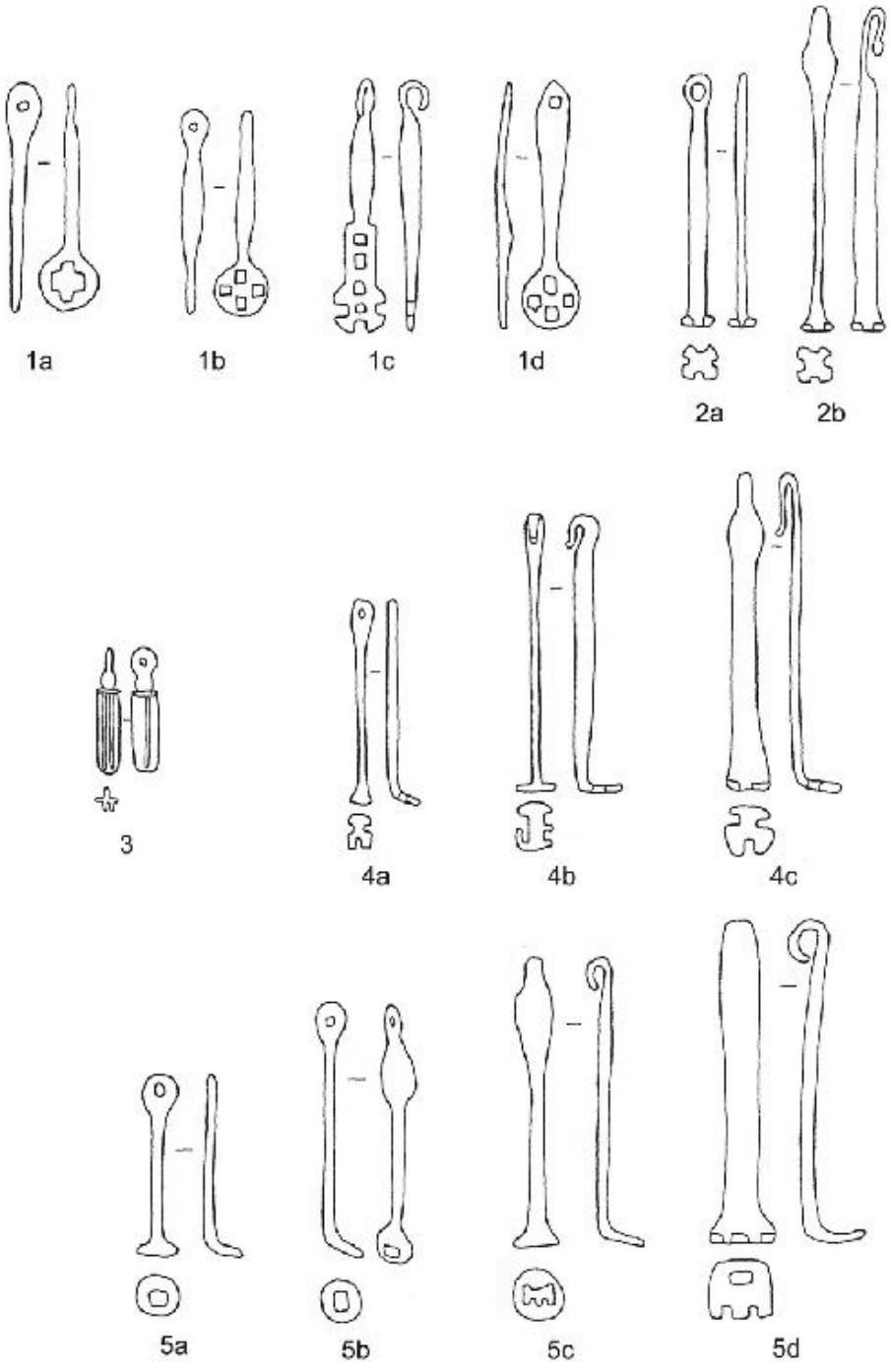



FIGURE 10.3
*Types of medieval padlock key*

underside of the case, or be drawn along those with T-shaped keyholes along the underside. It could theoretically, therefore, have been used with any type

of barrel padlock, although in practice it is especially suitable for those of Types A, B and E. Type 4 padlock keys may be subdivided into Types 4a–c.

— Type 4a. Padlock keys **I214 –224** have looped terminals and plain stems, the latter parallel-sided, tapered, part-thickened or part-thinned towards the terminal. The thickened upper parts of **I215–216** and **I220** would have acted as stops against the end-plate of a barrel padlock.

— Type 4b. **I225–228** have plain, parallel-sided stems and hooked terminals, the terminal on **I228** resembling an unforged loop, that on **I226** fully developed.

— Type 4c. Padlock keys **I229–237** have stems with expanded and hooked terminals, the expansion either a flattened lozenge or oval shape.

**I238** and **I239–241** are bit and stem fragments incapable of certain classification, **I238** coming from within barrel padlock **I16**.

Type 4 padlock keys are found throughout the medieval period, but most come from 11th to 13th-century contexts. Looped stems are as common as those with hooks, and the bits are fairly standard, most having single ward cuts to the front and in each side. **I232**, however, has only side ward cuts, and **I220–221** and **I226** are more complicated.

## Type 5

Padlock keys with looped, laterally set bits.

This type of padlock key, represented by **I242–291** was used in a similar way to Type 4 keys, and may be subdivided into Types 5a–d:

— Type 5a: **I242** has a looped terminal on a plain stem.
— Type 5b: **I243–245** have expanded terminals with transversely set loops. The expansion are all of a rounded lozenge shape.
— Type 5c: **I246–269** have stems with expanded and hooked terminals, the expansions either of a flattened lozenge or oval shape. The hook is set to the rear on all but **I251**.
— Type 5d: **I270–280** have stems with hooked terminals which are set to the rear on all except **I270**. The stems are generally broad and widen slightly as they curve round into the hook, although **I271**, **I73** and **I77** have narrow stems.

**I281–284** have incomplete expanded stems and may be either Type 5b or 5c, whilst **I285** and **I286–291** are Type 5 stem and bit fragments, **I285** coming from

within barrel padlock **I90**.

Type 5 padlock keys, like the related Type 4 keys, were in use throughout the medieval period, although most are from 11th to 14th-century contexts. Most have hooked terminals on either plain or expanded stems, but **I242** has the looped terminal more commonly associated with padlock keys of Types 1–3. **I243–245** have a hybrid combination of expanded stem and looped terminal.

The bits vary in form, with from one to three ward cuts. Some have unbroken or closed edges and plain (**I243**) or shaped (**I260**) wards, others combine open and closed wards in various ways (e.g. **I246**, **I259**, **I264**, **I268** and **I278**). **I274** is unique in having a single central open ward cut. The shaping of the cuts of such bits as **I249** and **I272** was to allow the passage of wire brazed along springs, as on padlock bolt **I98**.

## Discussion

Padlock keys' forms were determined by those of the box of barrel padlocks to be opened, but the shape of the stem and terminal was subject to the influence of fashion. This is evident amongst the keys, since the plain stem and hooked terminal are found throughout the period, but the shaped and decorated types have restricted chronologies. The terminal of the padlock key acted in part as a handle held when using the key, and in part as a means of suspension. There are two main types, looped and hooked, and **I189**, **I193** and **I197** retain suspension rings, one complete, the others broken.

Five main types of padlock key were used during the medieval period, and Types 4 and 5 with their laterally set bits are the most common. These keys could be used on any type of barrel padlock, given an appropriately shaped keyhole, and they are found throughout the medieval period. Padlock keys of Type 1, the next most common, are largely restricted to 11th to 13th-century contexts, and this dating coincides with that of box padlocks and barrel padlocks with T-shaped keyholes, particularly those of Type B3. Type 2 padlock keys could be used with two keyhole shapes, and were thus more versatile than the complicated Type 3 key, which is rarely found and was probably principally used with Type C barrel padlocks.

Padlock key stems are plain, swollen or expanded, and the plain stem, generally combined with a hooked terminal, is found on all types of keys and was clearly the most practical shape. The swollen stem, only found on padlock keys of Type 1 and on Continental examples of Type 3, was frequently decorated with spiral grooves, some plain, others inlaid with non-ferrous wire. These grooves are found in the 11th to 13th centuries, but the inlay seems to be

restricted to keys from 12th-century contexts. **I204–205** are the only other stems with any decoration. The expanded stem is found only in the 11th to 14th centuries, most frequently combined with a hooked terminal but occasionally with a loop.

The differing combinations of ward cuts in bits reflect the various types of padlock bolt construction. The majority of bits are practically shaped, but a few have elaborately shaped holes, or an excessive number. Most ward cuts were intended to pass spines with leaf springs, but a few passed rods added to the bolts to complicate their arrangement and increase security. The shaping of cuts such as **I249** and **I272** reflects springs with attached wire. Padlock keys **I238**, **I251** and **I285** are of interest because they were found with barrel padlocks **I16**, **I83** and **I90**.

## 10.5 Keys

Medieval keys have been subjected to considerable study, but their analysis has rarely rested on dated examples, and classification has been heavily dependent on representations and on typological consideration. Penny's study of the Salisbury keys (Penny 1911), all notionally post-dating the foundation of the city in 1227, certainly includes some post-medieval keys, and those classified by J B w ard Perkins (1967, 133–144, pls XXIX–XXXI) include both pre- and post-medieval keys.

Medieval locks **I142 –177** and certain types of padlock (**I125 –141**) were opened with keys which turned in the lock, passing any ward or collar before throwing or lifting the bolt. The keys have variously shaped bows and either solid or hollow stems whose tips fitted into or over appropriate holes, mounts, or pins within lock cases. The stems and occasionally the bows are moulded or have decorative grooves, and the bits have ward cuts and often collar cuts. keys may be divided into eight types (A–H) according to the form of the stem and position of the bit, and some can be further subdivided. Types A–H (Figure 10.4) may be correlated with w ard Perkins' classification (1967, 133–144) as follows:

A = I
B = II
C = III
D = incorporated in V but not recognised
E = IV and some VIII
F = V

G = VII
H = V and some VIII.

## Incomplete forged Keys

Iron keys generally have either solid stems with bits forged in one or hollow stems with bits rolled in one or brazed on. **I292–295** are incompletely forged keys, **I292–293** resembling **I294** with its solid stem, projecting tip and uncut bit. **I295** is even less completely forged, and is made from rectangular-sectioned iron which has been drawn out to form a stem and roughly shaped into a d -shaped bow. The bit has yet to be drawn down and out, and the free end of the bow welded to the stem head before finishing. **I292–294** are Type F or G keys, **I295** Type E. **I294** is from Croft A at Goltho, Lincolnshire, which in the late 14th to early 15th century housed a smithy, and **I295** is from occupation debris in the forge at w altham Abbey, Essex.

## Type A

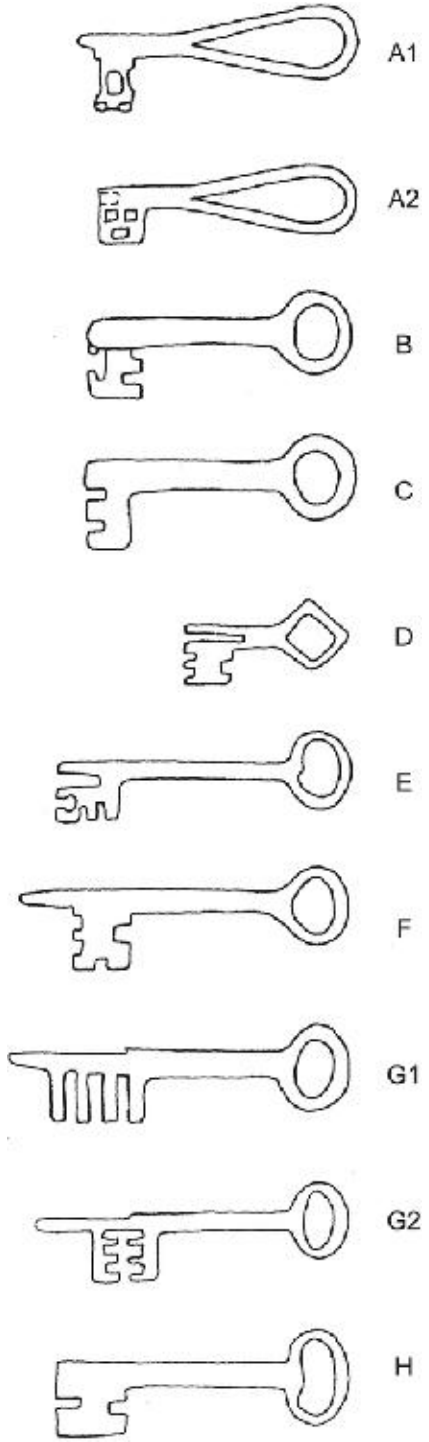



FIGURE 10.4
*Types of medieval key*

Keys of Type A, made as commonly in copper alloy as iron, have deep narrow bits which are almost invariably perforated with one or more ward cuts. The bits of the iron keys often also have a divided, upturned fore-edge, and they (**I296–303**) may be divided into those with projecting stem tips (Type A1) and with hollow stem tips (Type A2). Those of Type A1 are normally of iron, of Type A2 of copper alloy.

**I296–303** are all Type A1, **I297** and **I300–301** having bits with upturned fore-edges, the others being flat or incomplete. The bows are all pear-shaped, the stems of **I296–297** grooved and **I300** moulded. Type A2 copper-alloy keys, almost all of pre-Conquest date, have ring and pear-shaped bows which are either plain, solid or have openwork decoration (Almgren 1955, 10–20; Ward Perkins 1967, 134–136, pl XXIX 2–5, 7–10).

Type A keys are principally of pre-Conquest date, and the medieval iron examples suggest that the key and type of lock it operated (see above, Locks Type 1a) barely if at all outlasted the 11th century. **I303** is probably residual, and it is significant that the other examples are all from sites with earlier occupation.

## Type B

Keys of Type B, **I304–367**, have hollow stems rolled in one with the bit, and a bow which is either a single-piece forging with the stem or a separate forging set into the head of the stem. Most of the keys have ring bows, but a few are of other shapes, particularly lozenge-shaped. The stems are generally plain, but a number have decorative grooves, occasionally combined with a moulding just below the bow as on **I327** or **I343**. Three of the small keys, **I348–349** and **I352** have a collar at this point to strengthen the junction of the two parts. The bits are almost all flat and have various combinations of ward cuts, but several (**I323**, **I336** and **I345**) are channelled, and **I352** is of double thickness. The keys vary in size from small examples such as **I307**, **I333** and **I348** to large ones like **I312** and **I319**. Type B keys were used throughout the medieval period, and their numbers reached a peak during the 13th century.

## Type C

Type C keys, with hollow stems and separately made bits welded or brazed in position, are related to those of Type B although they are far less common, probably because they were more difficult to make. **I368–379** are the few

examples of the type, and they come from 12th to 16th-century contexts. They vary in size and include some small keys. The bows are variously shaped, and most stems are plain; although **I374** is grooved and **I370** and **I373** are moulded. **I377–378** have collars, and the bit of **I375** is channelled.

**I380–391** are keys of either Type B or C, which are too corroded to classify but are of interest for their range of bow form. Their dates complement those of the main types.

## Type D

keys of Type d have solid stems which split close to the bow into one or occasionally two upper arms and into a single lower arm which carries the bit. The tip of the stem and end of the bit are in line. The type is not at all common, and **I392–397** are from 11th to 13th-century contexts. They all have ring or lozenge-shaped bows, and all except **I397** have moulded stems or bows.

## Type E

Type E keys **I398–451** have solid stems with tips which end in line with the end of the bit. Many, including **I398-400**, **I420** and **I411–442**, are small although there are as many again of larger size. A significant number of keys have bits with toothed fore-edges, and several of these are also channelled. The remaining bits have various combinations of ward cut, and some, including **I410–411** and **I419** are complicated. The bows are normally ring-, D- or oval-shaped, but a number of small keys have thistle-shaped bows, several with additional shaping. **I417**, **I435** and **I442**, also small keys, have plate bows, namely flat sheet bows with small holes. Stems which are moulded or grooved or both are commonplace, ranging for example from the simplicity of **I406**, **I435** or **I445** to the elaboration of **I410–411**. The moulding invariably occurs at the junction between stem and bit, and takes the form of narrow beads (**I406**), bulbous swellings (**I410-411**) and box mouldings (**I415–435**). The grooves are either concentric (**I407**) or spiral (**I410**).

Keys of Type E were probably introduced during the 13th century, and they continued in use throughout the medieval period.

## Type F

Type F keys **I452–493** have solid stems with projecting tips and bits which could be used from only one side of a lock. The bits generally have asymmetrical wards; the few with symmetrical wards in the sides of the bit never have a central ward cut which penetrates the full depth of the bit. Type F keys are found throughout the medieval period, but in greatest numbers in the 12th to 14th centuries. Ring bows are the commonest bow form, but a significant number are lozenge-shaped, **I469** having moulded corner bosses. Several have moulded or grooved stems or both, and the bits vary from simple (**I463** and **I482**) to complex (**I453** and **I475**).

## Type G

Type G keys have solid stems with projecting tips and symmetrical bits for use from either side of a lock. They can be subdivided into two groups, Type G1 with the wards generally perpendicular to the stem, and Type G2 with the wards grouped around a central opening. The step on the stem over many of the bits acted as a stop against the ward of the lock, and prevented the key being pushed too far through it.

— Type G1. k eys **I494–535** have one or more ward cuts which run the depth of the bit, dividing it at its simplest into two (**I494**, **I498**, **I527**) or four (**I506**, **I525**) parts. The ward cuts are usually more complicated, and include fore-edge cuts (**I518** and **I521**), side cuts (**I522**) or combinations of the two (**I503**, **I529**), but yet more complex lock mechanisms with extra wards are implied by cuts within the bits of **I510**, **I514** and **I520**. In general the earlier bits are the simpler ones, the more complex bits appearing in the 14th century. Most of the bows are d - shaped or oval, and a few stems are moulded or grooved, **I495** having silver inlaid grooves, **I532** white metal plating retained in its grooves. **I497** has a simple moulding at the head of the stem, and **I513** is both moulded and grooved.

— Type G2. k eys **I536–577** have wards grouped symmetrically around a central opening, and although the bits may have other small cuts, they are otherwise undivided. These bits turned round wards with one or more collars, **I538** and **I555** around wards with single horizontal and oblique collars respectively, **I541** and **I550** around wards with paired similarly horizontal and oblique collars. **I544** implies the horizontal collars. The bows are generally oval or D-shaped, but there are a few ring bows and bows incorporating some kidney-shaping.

Type G keys are the most common single type of medieval key, undoubtedly

because they were versatile enough to be used from either side of a lock. The type is known from a few early medieval contexts, but is commonest in the late medieval period and continued on to become the principal type of post-medieval key.

## Type H

Type H keys have solid stems which have hollow tips. Medieval examples seem almost invariably to have been of copper alloy (w ard Perkins 1967, 140–141, pl XXIX, 11–18), but **I578** is of iron and of 16th-century date. Further post-medieval iron keys of this type are known.

## Discussion

Eight main types of medieval key may be identified, most of iron but a very few of copper alloy. The use of each metal was largely determined by their differing properties, iron being wrought and copper alloy normally cast. k eys of Type A are nearly all pre-Conquest in date, and Type A1 is usually of iron, Type A2 of copper alloy. Medieval keys of Type H are also almost entirely of copper alloy, although subsequently iron was used as commonly. Types B–D and G are exclusively of iron, but some copper-alloy keys of Types E and F are known, mostly of small size.

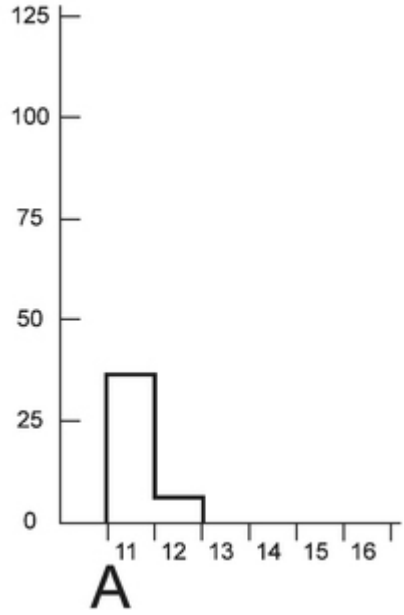
The form of the stems and bits of keys was determined by the various types of lock in use during the medieval period. keys of Type A were used with locks of comparatively simple type whereas those of Types B–H were used with locks incorporating wards, collars and sometimes tumblers. Types B–F and H could only be used from one side of a lock, but Type G keys were designed for use from either side.

Many keys are of types in use for much of the medieval period (Figure 10.5), although Type A is unlikely to have been used after the 11th century, and the rarely found Type d is restricted to 11th to 13th-century contexts. k eys of Types B and C were used throughout the medieval period, but those of Type E were probably introduced during the 13th century, and they seem to have superseded the longer established and related Type F keys during the late medieval period. The increasing popularity of locks operated by Type G keys, which also have projecting tips, may have affected the use of Type F. Type G keys are found in small numbers in the early medieval period, perhaps having been introduced in the 12th century, and they became the most common form

of late medieval key. Iron keys of Type H are mainly of post-medieval date.

The bow forms of keys exhibit certain distinct changes of popularity, no doubt influenced by fashion. The pear-shaped bow is restricted to Type A1 keys and can therefore hardly have outlasted the 11th century. The practical and easily forged ring bow, however, was used throughout the medieval period and between the 11th and 14th centuries was the most popular single bow form. Lozenge-shaped bows are found as late as the 13th century but the form then rapidly went out of fashion and was succeeded by oval and d -shaped bows which only occur in any numbers during and after the 13th century. The forging of bows from solid stems at times incidentally produced an internal shaping of vaguely kidney shape, but properly kidney-shaped bow interiors are only found on a few late medieval keys principally of 15th to 16th-century date. The fully developed kidney-shaped bow appears occasionally at this time, but it did not become popular until the post-medieval period. A few late medieval keys have externally pointed bows, but the pointed heart-shaped bow seems to be a post-medieval form. The w inchester Cathedral roof bosses of 1503–09, and the other examples quoted by w ard Perkins (1967, 141–142) as medieval seem, however, to have pointed bows combined perhaps with an internal kidney shaping. Thistle-shaped bows occur on a few keys, mainly of small size, from 13th-century and later contexts, and a number of other small keys have circular or lozenge-shaped plate bows.

The majority of key bows are plain, although a few lozenge-shaped bows as well as the thistle-shaped bows have additional decoration. The corner bosses on some lozenge-shaped bows are occasionally moulded rather than plain. These decorated bows have the same date range as the plain ones.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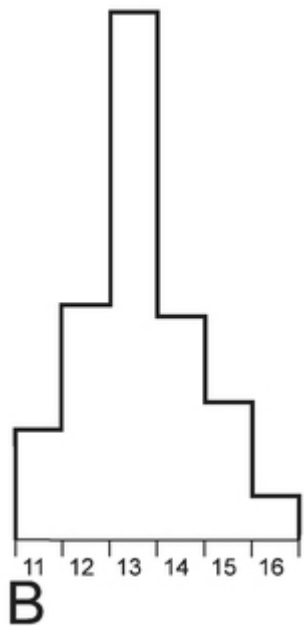
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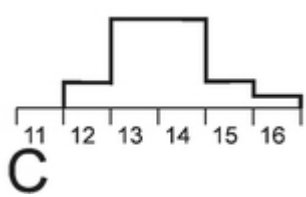
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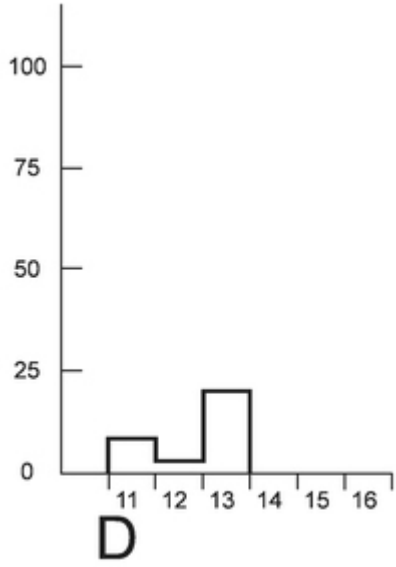
14
15
16
C

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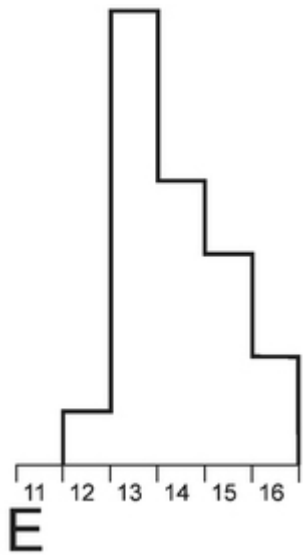


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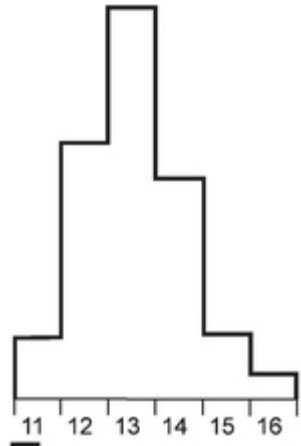
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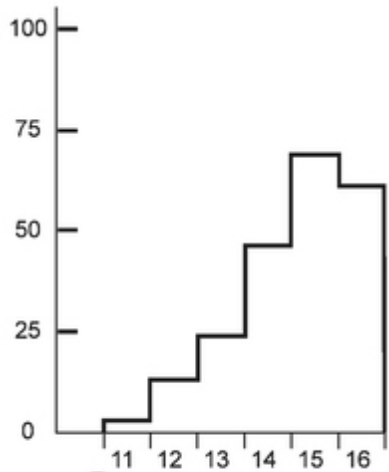
F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75
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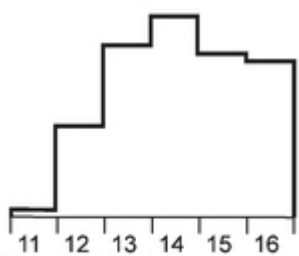
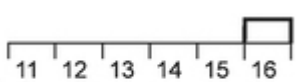
11 12 13 14 15 16

$G_1$


11 12 13 14 15 16

$G_2$


11 12 13 14 15 16

H

FIGURE 10.5
*Chronological range of types of medieval key (the graphs only include objects dated to within three centimes or less, those from a single century being awarded six points, those from two or three centuries three or two points respectively per century)*

Mouldings and incised concentric and spiral grooves sometimes decorate key stems. on Type B and C keys this most frequently takes the form of narrow continuous or broken bead mouldings at the junction of their hollow stems with the bow, whilst the solid stems of Types d and G have bulbous or box mouldings at this point. Collars on a few late medieval keys with hollow stems resemble these latter mouldings but are in fact a constructional feature. decorative grooves occur most frequently on the stems of keys of Types B, E and F, and only rarely on Type G. These decorative elements are often accompanied by non-ferrous plating, which is also found on plain keys, and which served to protect the key from rusting as well as giving it a superior appearance. The plating is normally just that, and not excessive brazing metal since only Type C keys have separately applied, brazed-on bits. Plating is most frequently revealed by X-radiographs, and has rarely been analysed. **I495** has silver inlay however.

## 10.6 Miscellaneous Keys

**I579–582** are keys with slender stems, hooked terminals and solid plain bits. The spatulate form of the bit is unusual, and its use uncertain.

**I583–585** are latch keys from late medieval or 16th-century contexts. They bear a superficial resemblance to certain early medieval padlock keys but differ from them in not having individual holes in their bits but rather an openwork arrangement. They were used like padlock keys, however, being drawn along the lock rather than turned in it.

**I1 BOX PADLOCK**
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.
Box padlock with fragment of bolt. Case damaged and plain, but with suggestions of former decorative straps. T-shaped keyhole in one narrow side; opposing side with attached tube lost. Case L 75mm.
Reader 1913, 167, fig 3.2–5; Helliwell and Macleod 1965.

**I2 BOX PADLOCK**
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.

Box padlock with plain case but for strap on one side and tube down another. d amaged.
L 43mm.
Excavated by d Macleod.

**I3 BOX PADLOCK**
Goltho Manor, Lincolnshire.
*c*110 0 –50.
Padlock case with attached tube down one side; opposing side with keyhole lost.
Twisted rods decorate case. L 34mm.
Goodall 1987, fig 158.100.

**I4 Padlock BoLT**
Oxford.
Second half 11th century.
U-shaped padlock bolt with rectangular closing plate and two spines, each with double leaf springs. L 54mm.
Goodall 1977e, 142, fig 25.1.

**I5 Padlock BolT**
Glottenham, East Sussex.
Mid to late 13th century.
U-shaped padlock bolt, broken, with rectangular closing plate. Form of springs uncertain. L 61mm.
Excavated by d Martin.

**16 Ba RRel Padlock**
Winchester, Hampshire.
*c*1110.
Padlock case with attached tube set between lozenge-shaped end-plates and reinforced by five spirally twisted rods. Rectangular keyhole in one end-plate, bolt entry in other.
Metallurgy: brazing metal attaching tube to case identified as brass. L 42mm.
Goodall 1990-21, fig 311.3643.

**I7 BaRRel Padlock**
Christchurch, Hampshire.
12th–13th century.
Padlock case with attached tube set between pear-shaped end-plates and reinforced by four longitudinal plain rods and two pivoting fins.

Rectangular keyhole in one end-plate, square bolt entry in other. L 65mm.

Goodall 1983b, fig 34.46.

**I8 PIVoTInG FIn** (not illustrated)

Winchester, Hampshire.

*c*1093–94.

Broken, flattened, triangular-shaped pivoting fin. L 69mm.

Goodall 1990-21, 1008, no. 3641.

**I9 PIVOTING FIN** not illustrated)

w inchester, Hampshire.

11th to?mid 12th century.

Flattened, triangular-shaped pivoting fin, concave sides. L 79mm.

Goodall 1990-21, 1008, no. 3644.

**I10 PIVOTING FIn**

w alton, Aylesbury, Buckinghamshire.

12th century.

Broken triangular-shaped pivoting fin.

L 75mm.

Farley 1976, 267, fig 49.4.

**I11 BARRel Pdlock** (not illustrated)

w inchester, Hampshire.

Late 13th–early 14th century.

Padlock case with fin and tube. Case with plain longitudinal rods; rectangular keyhole in one end-plate, other lost. Fin and tube, bound by three straps, distorted and broken.

L 50mm.

Goodall 1990-21, fig 311.3649.

**I12 BARRel Padlock**

Winchester, Hampshire.

12th–13th century.

Padlock case with fin and tube. Corrugated case with central longitudinal straps and added sheet iron repairs. End-plate with keyhole broken, with bolt entry near complete. Fin broken, tube complete.

L 75mm.

Goodall 1990-21, fig 311.3647.

**I13 BARREL PADLOCK**

Lyveden, nNrthamptonshire.
Second quarter 13th century.
Padlock case with fin, tube lost. Case surface obscured by corrosion, end-plates corroded. Fin incomplete. L 77mm.
Bryant and Steane 1971, 61, fig 16ml.

**I14 BARREL PADLOCK**
Copt Hay, Tetsworth, o xfordshire.
Late 13th–14th century.
Padlock case with fin and tube. Projecting longitudinal straps along case. End-plates obscured by corrosion. L 67mm.
Robinson 1973, 104, fig 25.20.

**I15 BARREL PADLOCK**
Winchester, Hampshire.
15th century.
Padlock case with fin and tube. Case with plain longitudinal rods, end-plates with bolt entry and T-shaped keyhole. Fin and tube bound by straps, broken. L 29mm.
Goodall 1990-21, fig 311.3655.

**I16/I238 BARREL PADLOCK AND KEY**
Winchester, Hampshire.
Late 14th century.
Padlock case with fin and tube, all broken.
Case with projecting longitudinal straps retains padlock key **I238**. L 70mm.
Goodall 1990-21, fig 311.3652.

**I17 BARREL PADLOCK** (not illustrated)
Winchester, Hampshire.
14th century.
Padlock case, fin and tube, all broken. Case with plain longitudinal rods along and end-plate with broken rectangular keyhole.
L 25mm.
Goodall 1990-21, 1010, no. 3654.

**I18 BARREL PADLOCK** (not illustrated)
oOd Sarum, w iltshire.
Principally medieval, to 14th century.
Padlock case fragment with plain longitudinal rods and base of fin. Tube lost.

Fragment of bolt with three spines in case. L 60mm.
Salisbury and South w iltshire Museum,
Salisbury, oOS.C124, 30/1920–21.

**I19 BARREL PADLOCK**

North Elmham Park, n orfolk.
*c*1150 –*c*1600.
Padlock case with fin and tube. Case with longitudinal straps and keyhole and bolt entry in end-plates. L 79mm.
Goodall 1980a, 509, fig 265.9.

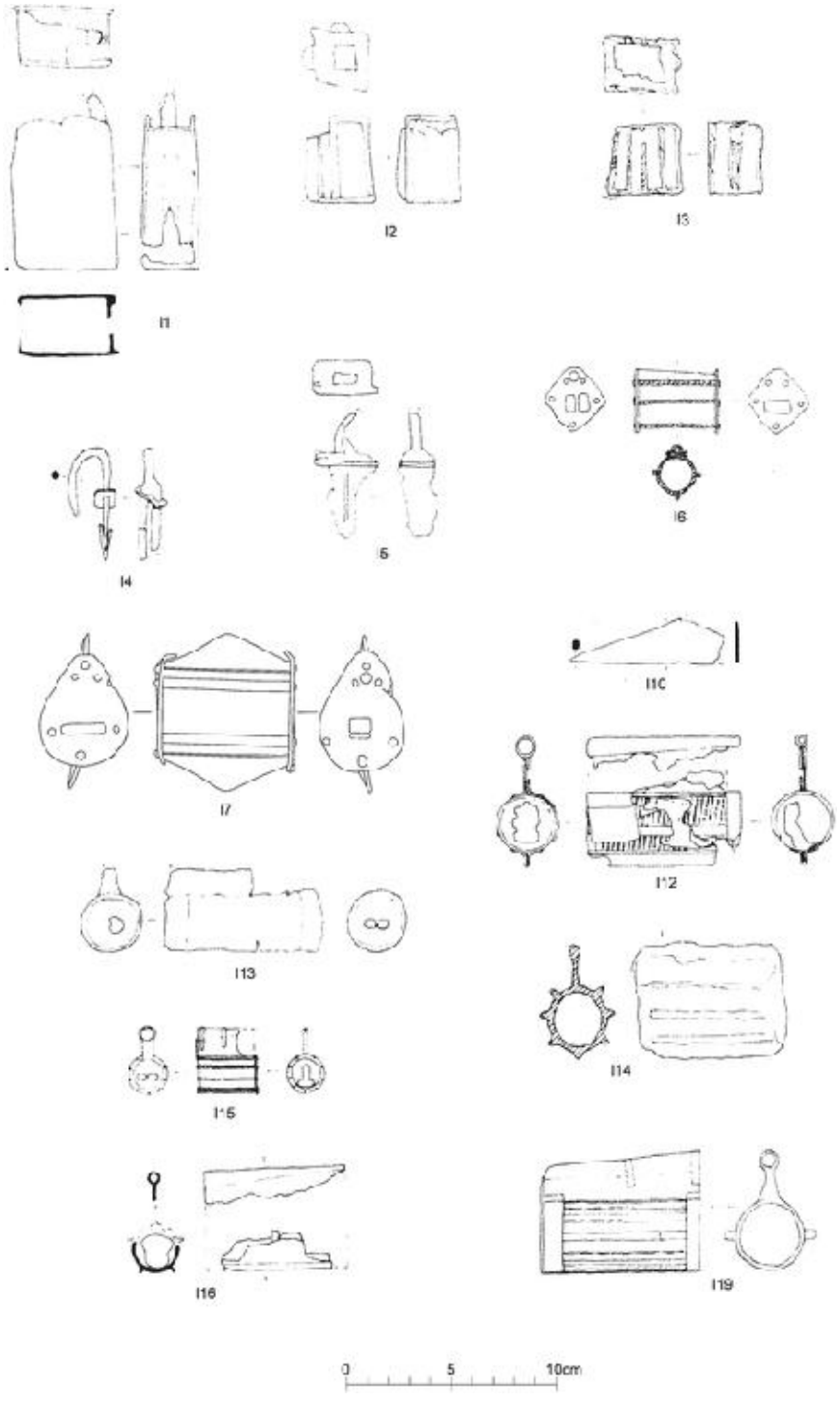



FIGURE 10.6
*Box padlocks, barrel padlocks, and pivoting fin*

**I20 BARREL PADLOCK**

Eynsford Castle, kent.

12th century.

Padlock case with fin, tube, and bolt. Case with longitudinal straps and T-shaped keyhole cutting across end-plate and underside. Three rectangular holes in other end-plate for spines of U-shaped bolt, each of which have, or had, double leaf springs. Case L 75mm.

Rigold and Fleming 1973, 105, fig 9.7.

**I21 BARREL PADLOCK**

Seacourt, o xfordshire.

Mid to late 12th to late 14th century.

Padlock case with fin, tube lost. Case with plain longitudinal rods, T-shaped keyhole across end-plate and underside, and blocked bolt entry.

L 57mm.

Biddle 1961–62, 181, fig 31.5, scale incorrect.

**I22 BARREl PADLOCK**

Goltho Manor, Lincolnshire.

Around late 11th century.

Padlock case with fin and distorted tube. Case has longitudinal and transverse straps, T-shaped keyhole along underside, and damaged or lost end-plates. Perforation in fin and in cheeks alongside keyhole. Straps bind tube to fin.

L 62mm.

Goodall 1987, fig 158.102.

**I23 BARREL PADLOCK**

Goltho Manor, Lincolnshire.

*c*1000–1100.

Padlock case with fin and tube, both distorted.

Case has longitudinal and transverse straps and T-shaped keyhole along underside. Form of bolt entry in end-plate unknown. Straps bind fin and tube. L 75mm.

Goodall 1987, fig 158.101.

**I24 BARREL PADLOCK**

Castle Acre Castle, norfolk.

1140s/1150s deposit with derived material. Site founded soon after 1066.

Padlock case with fin and tube. Case with central longifudinal straps, wavy line decoration and T-shaped keyhole along underside.

Bolt entry in end-plate blocked. L 44mm.

Goodall 1982, fig 39, no. 66.

**I25 BARREL PADLOCK** (not illustrated)
Castle Acre Castle, norfolk.
1140s deposit with derived material. Site founded soon after 1066.
Padlock case with fin and tube. Case with central longitudinal and transverse straps, and
T-shaped keyhole along underside. Fin and tube, damaged, bound by straps. L 77mm.
Goodall 1982.

**I26–27 BARREL PADLOCK**
(not illustrated)
Castle Acre Castle, norfolk.
Second half 12th century.
Padlock cases with fin and tube, identical to
**I25**. L 77 and 71mm.
Goodall 1982.

**I28 BARREL PADLOCK**
King's Lynn, Norfolk.
*c*1150–1250.
Padlock case with fin and tube. Corrugated case with longitudinal straps, T-shaped keyhole along underside, and broken bolt entry in end plate. Straps join tube and fin, the latter perforated. L 57mm.
Goodall and Carter 1977, 291, fig 132.1.

**I29 BARREL PADLOCK**
King's Lynn, Norfolk.
13th century.
Padlock case with fin, tube and bolt. Case with longitudinal and transverse straps, damaged T-shaped keyhole along underside, and bolt entry in end-plate. Straps bind tube and fin.
U-shaped padlock bolt with circular closing plate and two spines, one with double leaf spring, other with double, leaf spring with forked ends and individual side springs (one lost). Copper-alloy brazing metal overall.
L 104mm.
Goodall and Carter 1977, 291, fig 132.2.

**I30 BARREL PADLOCK**
Winchester, Hampshire.
Late 13th–early 14th century.

Padlock case with fin, tube and bolt. Case with central longitudinal and transverse straps, and T-shaped keyhole along underside. Fin and tube bound by straps. U-shaped padlock bolt with closing plate (probably circular) and single spine with double leaf springs.
Overall copper-alloy plating. L 97mm.
Cunliffe 1964, 189, fig 66.8, pl VII.

**I31 BaRRel Padlock**
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.
Padlock case with fin and tube. Plain case with damaged T-shaped keyhole along underside and bolt entry in end-plate. n arrow fin, damaged tube. U-shaped padlock bolt broken.
L 80mm.
Reader 1913, 165–166, fig 2; Helliwell and Macleod 1965.

**I32 BARREL PADLOCK**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Padlock case with base of fin, tube lost. Case with longitudinal straps, T-shaped keyhole along underside, and rectangular bolt entry in end plate. L 44mm.
Salisbury and South w iltshire Museum, Salisbury, O.S.C122a, 8/1932.

**I33 BARREL PADLOCK** (not illustrated)
Portchester Castle, Hampshire.
14th century.
Padlock case with fin and tube. Case has projecting longitudinal rods and T-shaped keyhole along underside. Three square holes for bolt entry in end plate. L unknown, H 46mm.
Hinton 1977, 196, pl XLIIIb.

**I34 BARREL PADLOCK**
Boston, Lincolnshire.
Mid 15th century.
Padlock case with fin, tube lost. Case with longitudinal straps, T-shaped keyhole along underside, and inset end-plate for bolt entry.
U-shaped padlock bolt, broken, has four springs and a rod. L 62mm.
Goodall 1972, fig 7.1, pl 1.

**I35 BARREL PADLOCK** (not illustrated)
Castle Acre Castle, norfolk.

Medieval.
Padlock case, flattened and distorted, fin and tube lost. Case with central longitudinal straps, wavy line decoration and T-shaped keyhole.
L 55mm.
Goodall 1982.

**I36 BARREL PADLOCk** (not illustrated)
Winchester, Hampshire.
Late 13th–early 14th century.
Padlock case fragment with plain longitudina rods, end-plate with two rectangular holes for bolt, and stub of fin. Tube lost. L 27mm.
Goodall 1990-21, 1009, no. 3650.

**I37 BARREL PADLOCK** (not illustrated)
Winchester, Hampshire.
13th century.
Padlock case fragment with plain longitudina rods, broken end-plates and base of fin. Tube lost. L 42mm.
Goodall 1990-21, 1009, no. 3648.

**I38 BARREL PADLOCK** (not illustrated)
Winchester, Hampshire.
Mid 13th century.
Padlock case fragment with plain longitudina rods, end-plate with three rectangular holes fo bolt, and stub of fin. Tube lost. L 37mm.
Goodall 1990-21, 1009, no. 3646.

**I39 BARREL PADLOCK**
King's Lynn, norfolk.
14th century.
Fin and broken tube bound by straps.
d ecorative wavy straps on fin. Abundant copper-alloy brazing metal. L 84mm.
Goodall and Carter 1977, 291, fig 132.3.

**I40 BARREL PADLOCK**
Winchester, Hampshire.
14th century.
Fin and tube. L 63mm.
Goodall 1990-21, fig 311.3653.

**I41 BARREL PADLOCK**

Northolt Manor, Greater London.
1350–70.
Fin and tube bound by straps, with intermediate strap along fin. L 101mm.
Excavated by J G Hurst.

**I42 BARREL PADLOCK**
Faxton, northamptonshire.
Site: 12th–15th century.
Fin and tube, former with perforations.
L 68mm.
Excavated by L A S Butler.

**I43 PSDLOCK BOLT**
Rhuddlan, Clwyd.
Later 13th century.
U-shaped padlock bot, broken, with single spine with double leaf spring. L 122mm.
Goodall 1994, fig 17.6, no. 89.

**I44 PADLOCK BoLT**
Rhuddlan, Clwyd.
14th century,?earlier part or 1290–1300.
U-shaped padlock bolt with single spine with incomplete double leaf spring. L 99mm.
Goodall 1994, fig 17.6, no. 91.

**I45 PSDLOCK BOLT**
Lochmaben Castle, d umfries and Galloway.
Late 14th century.
U-shaped padlock bolt with single spine and double leaf spring. L 102mm.
Macdonald and Laing 1974–75, 148, fig 11.21.

**I46 PADLOCK BOLT**
Hen Caerwys, Clwyd.
*c*1450 –1520.
U-shaped padlock bolt with single spine and broken double leaf spring. L 92mm.
Excavated by G B Leach.

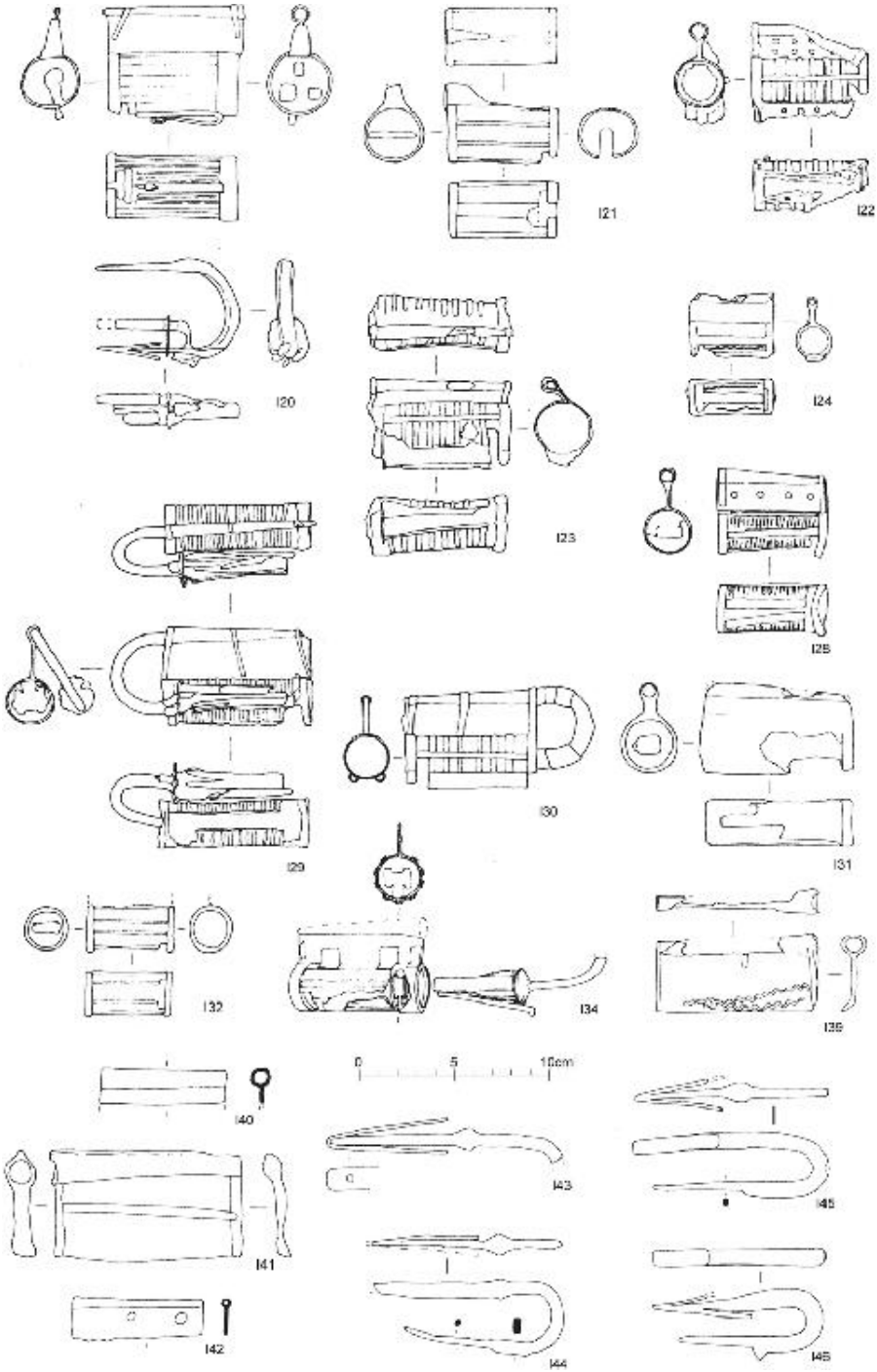



FIGURE 10.7
*Barrel padlocks and padlock bolts*

## I47 PADLOCK BOLT

Southampton, Hampshire.
1200–50.
U-shaped padlock bolt, incomplete, with single spine with double leaf spring. L 94mm.
Harvey 1975b, 277, fig 250.1988.

**I48 PADLOCK BOLT**
Rhuddlan, Clwyd.
1280s.
U-shaped padlock bolt with copper-alloy leaf springs riveted to iron spine; staple broken. Holes in each spring accommodate
L-shaped fittings (one lost) which acted as barriers for a key. L 74mm.
Goodall 1994, fig 17.6, no. 90.

**I49 PADLOCK BOLT** (not illustrated)
Winchester, Hampshire.
Early to mid 14th century.
U-shaped padlock bolt, broken, with single spine with double leaf spring and closing plate. L 92mm.
Goodall 1990-21, 1010, no. 3664.

**I50 PADLOCK BOLT** (not illustrated)
Goltho Manor, Lincolnshire.
*c*1000–1100.
U-shaped padlock bolt, broken, with stubs of two spines arranged as **I54**. d ecorative scroll above circular closing plate. L 41mm.
Goodall 1987, 183.

**I51 PADLOCK BOLT**
Winchester, Hampshire.
Mid to late 10th century.
U-shaped padlock bolt with oval closing plate and two spines, each with double leaf springs. L 52mm.
Goodall 1990-21, fig 312.3658.

**I52 PADLOCK BOLT**
Northampton.
12th century.
U-shaped padlock bolt, broken, with two spines each with double leaf springs.
Circular closing plate with decorative scrolls on outer surface. L 76mm.
Goodall *et al* 1979, 268, fig 116.4.

**I53 PADLOCK BOLT** (not illustrated)
winchester, Hampshire.
11th century.
U-shaped padlock bolt similar to **I51**. Two spines, one broken, the other with a double leaf spring. Rounded rectangular shaped closing plate. L 67mm.
Goodall 1990-21, 1010, no. 3661.

**I54 PADLOCK BOLT**
winchester, Hampshire.
Mid 13th century.
U-shaped padlock bolt with two spines, one riveted to the circular closing plate, the other part of the broken, U-shaped staple.
The former has a double leaf spring, the latter three separate leaves, the opposed ones with split tops. Case fragment attached to closing plate retains one plain longitudinal rod.
L 68mm.
Goodall 1990-21, fig 312.3663.

**I55 PADLOCK BOLT**
Lydney Castle, Gloucestershire.
12th, early 13th century.
U-shaped padlock bolt with damaged circular closing plate and three spines, one broken, one with a double leaf spring and one with three springs. L 158mm.
Casey 1931, 251–252, pl XXXV.L.

**I56 PADLOCK BOLT**
South witham, Lincolnshire.
1137–85 to *c*1220.
U-shaped padlock bolt with three broken spines and damaged closing plate.
Copper-alloy brazing metal present. L 72mm.
Goodall 2002, fig 7.1, no. 13.

**I57 PADLOCK BOLT**
winchester, Hampshire.
Early 13th century.
Broken U-shaped padlock bolt with three spines and decorative scroll fronting pear-shaped closing plate. L 68mm.
Goodall 1990-21, fig 312.3662.

**I58 PADLOCK BOLT**

weoley Castle, Birmingham, w est Midlands.

*c*1200–30.

U-shaped padlock bolt with three spines, only two retaining springs. d ecorative copper-alloy scrolls above damaged closing plate. L 80mm.

Oswald 1962, 129, fig 51.2.

**I59 PADLOCK BOLT**

Lyveden, Northamptonshire.

*c*1150–early 14th century.

U-shaped padlock bolt, broken, with stubs of three spines. d ecorative scrolls above circular closing plate. L 49mm.

Steane and Bryant 1975, 130, fig 49.144.

**I60 PADLOCK BOLT**

Lyveden, Northamptonshire.

Second quarter 13th century to very early

14th century.

U-schaped padlock bolt, broken, with stubs of three spines. d ecorative scrolls above circular closing plate. L. 64mm.

Bryant and Steane 1971, 61, fig 16.m3.

**I61 PADLOCK BOLT**

Netherton, Hampshire.

13th, early 14th century.

U-shaped padlock bolt with closing plate and three spines, one retaining double leaf spring. L 75mm.

Goodall 1990-28, fig 9.7 no. 354.

**I62 Padlock BolT**

Rayleigh Castle, Essex.

Site: *c*1070–*c*1350.

U-shaped padlock bolt, incomplete, with two spines, one with a double leaf spring, the other retaining only one side spring.

Scrolled closing plate. L 92mm.

Reader 1913, 167, fig 3.1; Helliwell and Macleod 1965.

**I63 PADLOCK BOLT**

Clarendon Palace, wiltshire.

Site: *c*1072 to later 15th century.

U-shaped padlock bolt, incomplete, with four spines. Copper-alloy brazing metal.

L 66mm.
Goodall 1988, fig 78.68; Borenius and
Charlton 1936.

**I64 PADLOCK BOLT**
Rhuddlan, Clwyd.
Later 13th century.
U-shaped padlock bolt, broken, with scrolled decoration. L 31mm.
Goodall 1994, fig 17.6, no. 88.

**I65 BARREL PADLOCK**
Netherton, Hampshire.
13th–14th century.
Padlock case with U-shaped housings and bolt. Case with longitudinal straps and keyhole in end-plate. Squared U-shaped bolt with two spines, one retaining a double leaf spring, and three rods. Looped handle.
L 54mm.
Goodall 1990-28, fig 9.7 no. 345.

**I66 BARREl PADLOCk**
Alvechurch, Hereford and worcester.
*c*1350 –1400.
Padlock case with U-shaped housings and bolt. Plain case. Squared U-shaped bolt with two spines, each with double leaf springs.
L 39mm.
Oswald 1954, 8, pl 5.4.

**I67 BARREL PADLOCK**
kings Langley, Hertfordshire.
1291–92 to later 14th or first half 15th cent ur y.
Padlock case with U-shaped housings and bolt. Plain case with keyhole in end-plate.
Squared U-shaped bolt with double leaf spring. L 41mm.
Neal 1973, 53, fig XIV.54.

**I68 BARREL PADLOCK**
London.
From City d itch, probably dug in 13th century and filled up in 1532.
Padlock case with U-shaped housings, one missing, and bolt. Plain case with broken keyhole across end-plate and underside.
Squared U-shaped bolt with projecting U-shaped handle. Two of original three spines with double leaf springs survive.

Case L 94mm.
waddington 1928. (Illustration based on drawing by J Clark.)

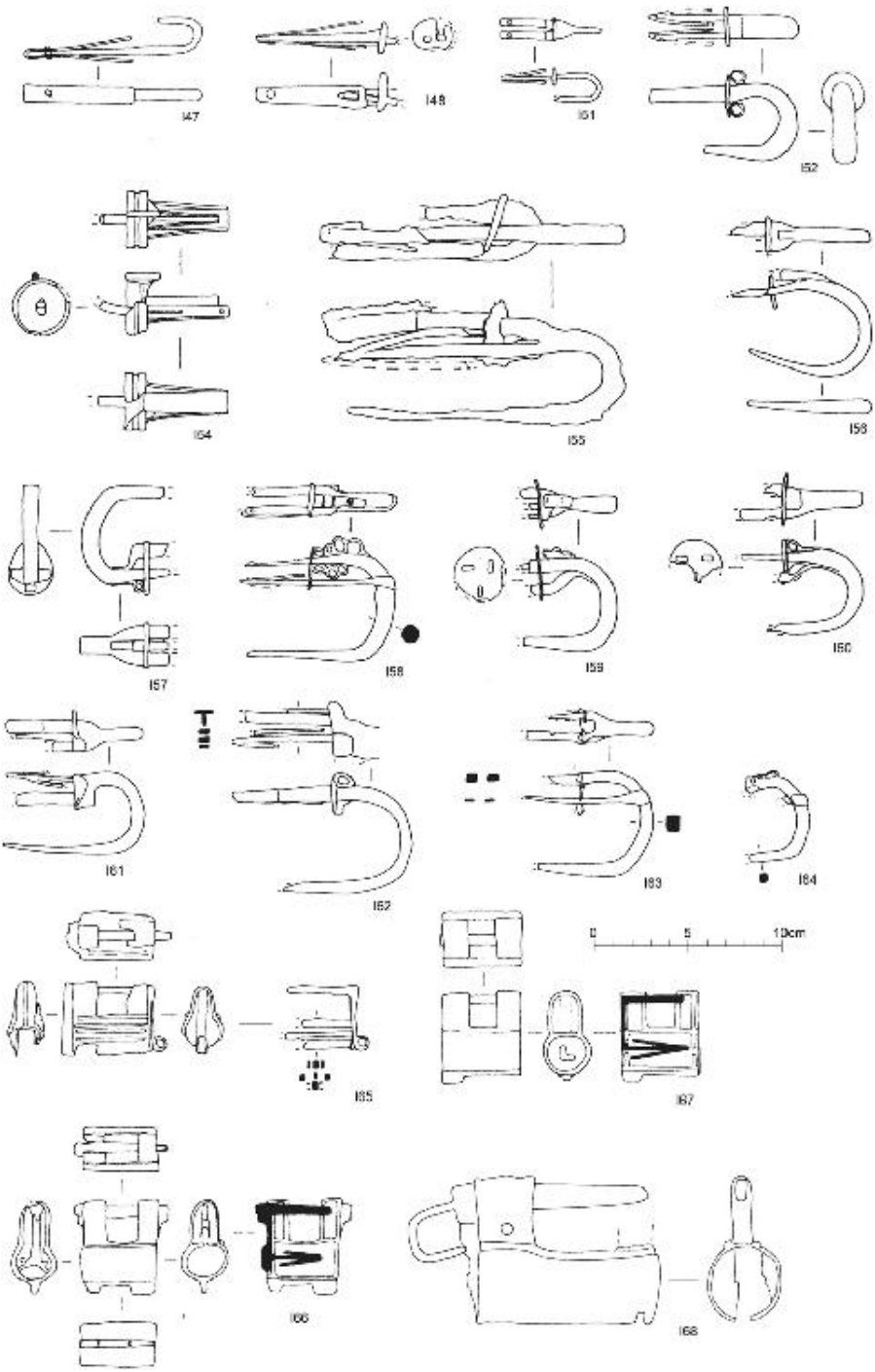



FIGURE 10.8

**I69 BARREL PADLOCK**
weoley Castle, Birmingham, w est Midlands.
Site: *c*1080 –1600.
Padlock case with U-shaped housings. Plain case, end-plates damaged. L 37mm.
Birmingham City Museum. For site see
oswald 1962.

**I70 PADLOCK BOLT**
Lyveden, Northamptonshire.
Late 13th to very early 14th century.
Squared U-shaped padlock bolt, incomplete.
Stubs of two spines, third missing. L 70mm.
Bryant and Steane 1969, 43, fig 18d.

**I71 PADLOCK BOLT**
Lyveden, Northamptonshire.
*c*1350–1450.
Squared U-shaped padlock bolt with looped handle projection. Three spines each with double leaf springs. L 39mm.
Steane and Bryant 1975, 130, fig 49.148.

**I72 PADLOCK BOLT**
Lyveden, Northamptonshire.
*c*1150 to early 14th century.
Squared U-shaped padlock bolt, incomplete.
One spine survives, with stub of double leaf spring, other lost. L 74mm.
Steane and Bryant 1975, 130, fig 49.145.

**I73 BARREL PADLOCK** (not illustrated)
winchester, Hampshire.
Early to?mid 16th century.
Padlock case with broken L-shaped arm.
Plain case, form of keyhole and bolt entry not clear. L 41mm.
Goodall 1990-21, 1011, no. 3668.

**I74 BARREL PADLOCK**
winchester, Hampshire.
15th–?16th century.
Padlock case with L-shaped arm and looped, L-shaped bolt, both

perforated.
Plain case. Bolt with two spines with double leaf springs. Metallurgy: copper-base alloy plating inside and outside case; steel spring.
L 45mm.
Goodall 1990-21, fig 313.3667.

**I75 BARREL PADLOCK**
London.
From City d itch, probably dug in 13th century and filled up in 1552.
Padlock case with L-shaped arm and looped, L-shaped bolt. Case has longitudinal straps, spirally twisted rod or thick wire around each end, and T-shaped keyhole across end-plate and underside of case. Bolt entry end-plate incomplete. Padlock bolt has four spines and central red which, like the springs, survive incompletely. Scrolls and loops on case and bolt part utilitarian, part decorative. Case L 106mm.
waddington 1928, 524, fig on p 525.

**I76 PADLOCK BOLT**
Winchester, Hampshire.
13th century.
L-shaped bolt, looped arm broken. o ne spine with double leaf spring. L 108mm.
Goodall 1990-21, fig 313.3669.

**I77 PADLOCK BOLT**
waltham Abbey, Essex.
*c*1200–40.
Looped, L-shaped padlock bolt. L 36mm.
Excavated by P J Huggins. From Sun Street.

**I78 PADLOCK BOLT**
Grenstein, Norfolk.
Later 14th, 15th century.
Looped, L-shaped padlock bolt retaining the stubs of two of the original three spines.
Handle infilled with scrolls. L 55mm.
Goodall 1980c, fig 79, no. 61.

**I79 PADLOCK BOLT**
winchester, Hampshire.
Late 17th–?18th century.
Looped, L-shaped bolt with spine retaining only one spring. Head of spine

shaped and T-sectioned. L 127mm.
Goodall 1990-21, fig 313.3670.

**I80 BARREL PADLOCK WITH SHACKLE, CHAIN AND SHACKLE**
winchester, Hampshire.
Late 10th to late 11th century.
Limb shackles. The looped ends of the U-shaped shackle hold interlocking links which close it and are attached by other links to the barrel padlock shackle. Padlock case plain with T-shaped keyhole in end-plate below shackle loop. T-shaped padlock bolt with two spines, each with double leaf springs, holds shackle closed.
overall L 365mm, padlock L 113mm.
Goodall 1990-21, fig 314.3671.

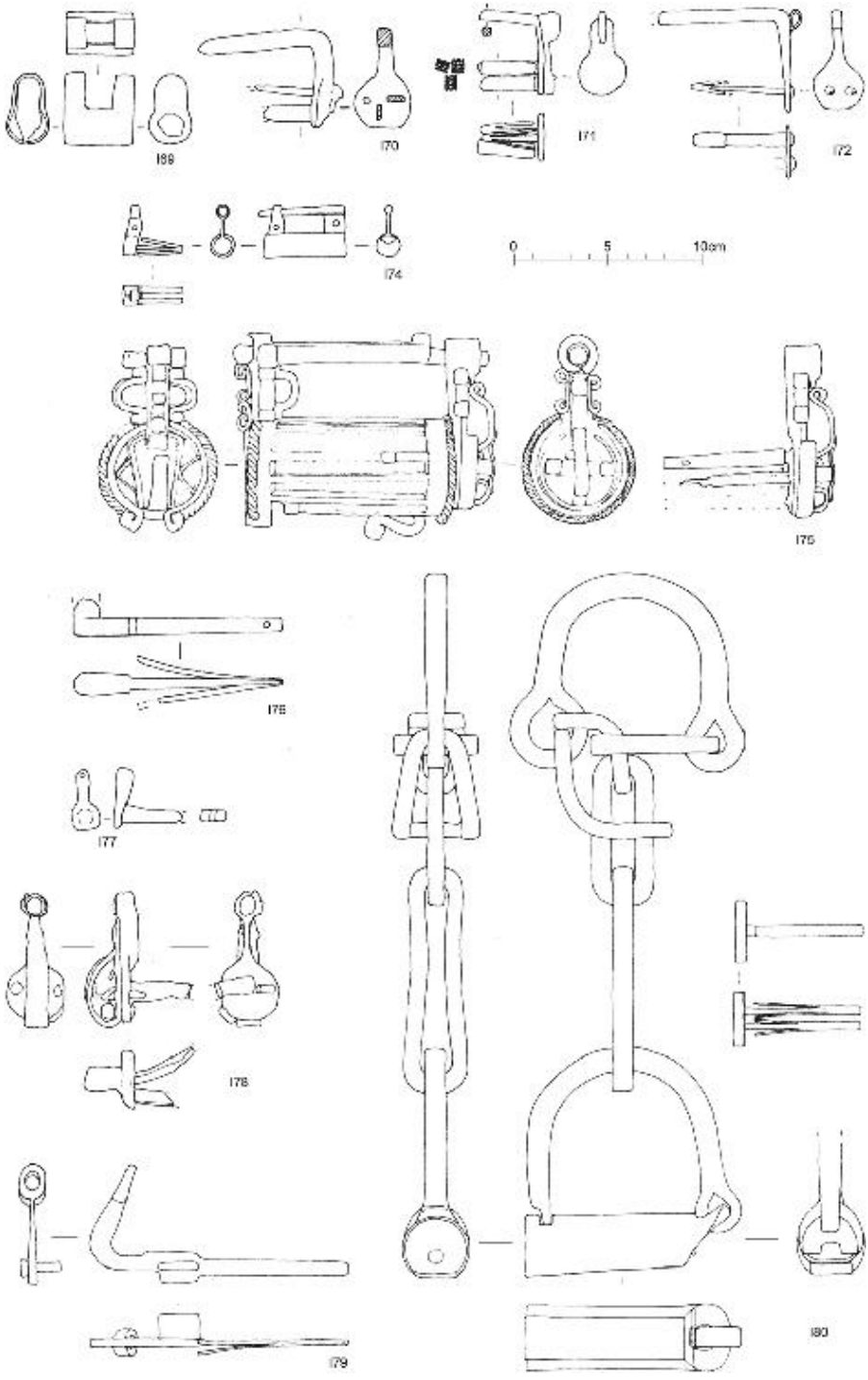



FIGURE 10.9
*Barrel padlocks and padlock bolts*

**I81 BARREL PADLOCK WITH SHACKLE, CHAIN AND SHACKLE** (not illustrated)
winchester, Hampshire.
Late 10th to late 11th century.
Limb shackles, almost identical to **I80** but no longer linked together.
Padlock bolt differs in having the double leaf springs of the spines set in planes at right angles to each other. Metallurgy: shackle, case spines and springs all wrought iron. Padlock L 101mm.
Goodall 1990-21, 1012, no. 3673.

**I82 BARREL PADLOCK WITH SHACKLE**
winchester, Hampshire.
Late 10th to late 11th century.
Plain padlock case strengthened by two broad straps around underside. k eyhole in end-plate below loop of shackle, which is held closed by a T-shaped bolt with two spines each with double leaf springs.
Padlock L 108mm.
Goodall 1990-21, fig 315.3672.

**I83/I251 BARREL PADLOCK WITH SHACKLE AND KEY**
winchester, Hampshire.
11th century.
Plain case with T-shaped keyhole in end-plate below loop of shackle. Shackle closed by T-shaped bolt with two spines each with double leaf springs. Additional strip on one spring. Found with key **I251**.
Padlock L 122mm.
Goodall 1990-21, fig 315.3674.

**I84 BARREL PADLOCK WITH SHACKLE**
west w oodhay, Berkshire.
12th/13th to 14th century.
Plain case with shackle. k eyhole below shackle loop. Case L 100mm.
Jervoise 1954, 65, fig 4.

**I85 BARREL PADLOCK WITH SHACKLE**
kettleby Thorpe, Lincolnshire.
14th–early 15th century.

Plain padlock case, damaged, keyhole largely blocked. Shackle broken. Case L 74mm.

Goodall 1974a, 33, fig 18.4.

**I86 BARRELL PADLOCK WITHS HACKLE**

Huish, w iltshire.

Site: 12th–mid 15th century.

Plain padlock case strengthened by broad strap around underside. T-shaped keyhole beneath shackle loop. Shackle closed by T-shaped padlock bolt with semicircular handle and three spines with corroded springs. Case L 113mm.

Shortt 1972, 116, fig 2.2.

**I87 BARREL PADLOCK WITH SHACKLE**

king's Lynn, n orfolk.

*c*1350–1500.

Plain padlock case with three broad straps, now incomplete, around underside. o riginal extent of straps shown by lines of brazing fluid, stippled on drawing. k eyhole beneath loop of broken shackle, whose expanded end with two holes for the former bolt is corroded within the case. L 91mm.

Goodall and Carter 1977, 291, fig 132.4.

**I88 BARREL PADLOCK WITH SHACKLE**

Hen Caerwys, Clwyd.

*c*1450–1520.

Distorted padlock case with broad straps along sides and round underside. Shackle lost. L 105mm.

Excavated by G B Leach.

**I89 BARREL PADLOCK WITH SHACKLE**

Bicester Priory, o xfordshire.

Site: end 12th century to 1536.

Plain padlock case damaged, shackle complete but holes for bolt in expanded end obscured. L 66mm.

Hinton 1968, 51, fig 16.1.

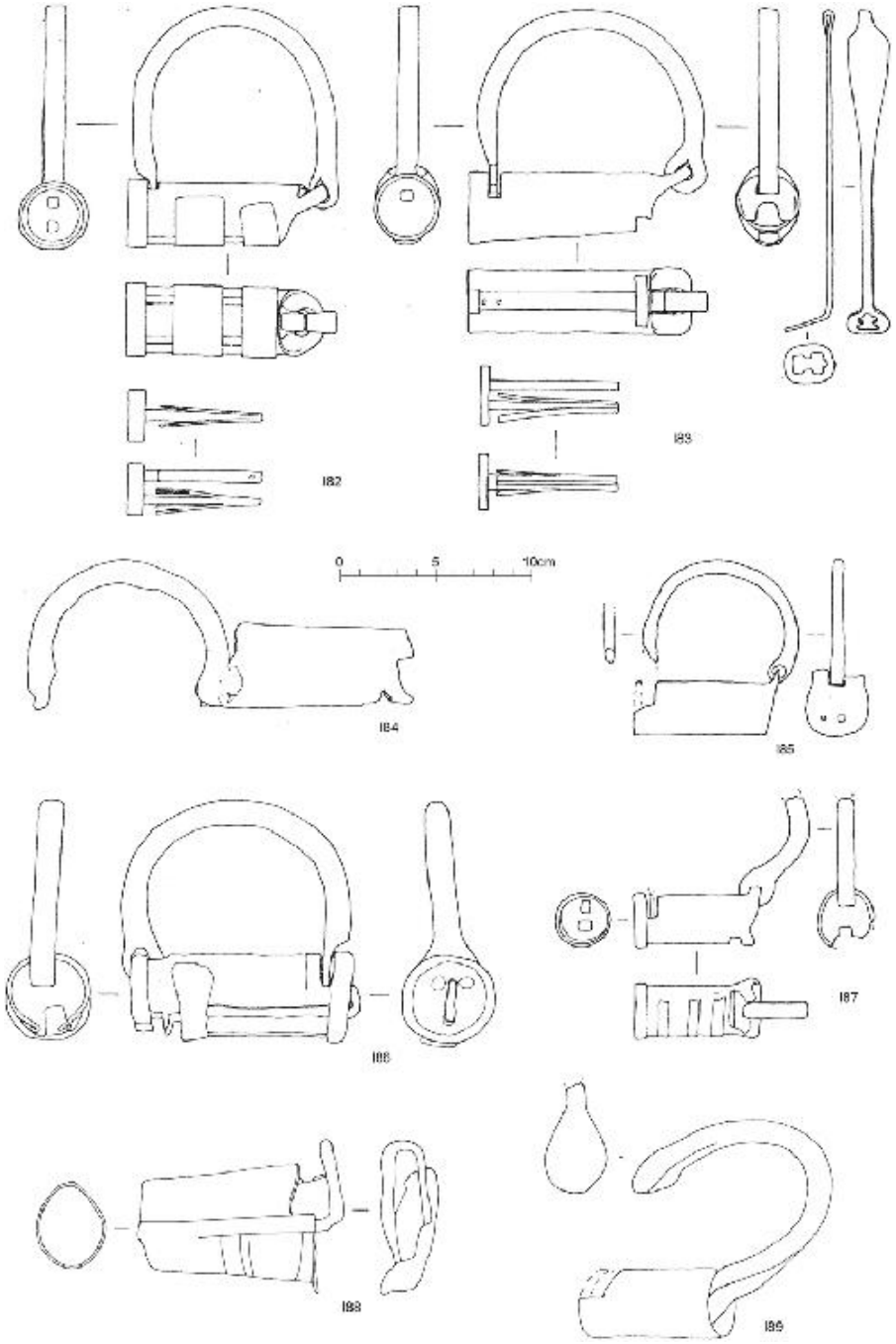



FIGURE 10.10
*Barrel padlocks*

## I90/I285 BARREL PADLOCK WITH SHACKLE, KEY AND CHAIN

Oxford.
13th to 16th century.
Barrel padlock with shackle found in association with link and swivel loop **J247** and with leg bone through shackle. Plain padlock case, with keyhole in end-plate below loop of shackle, buried complete with bolt and key. Bolt T-shaped with two spines each with double leaf spring and additional bar above; only that part of key **I285** within case now survives. Case L 125mm.
Excavated by T G Hassall. From Greyfriars burial ground.

**I91 BARREL PADLOCK**
**WITH SHACKLE**
waltham Abbey, Essex.
16th century.
d istorted padlock case, shackle lost. Case with three longitudinal straps and overall copper-alloy brazing metal. L 113mm.
Goodall 1973a, 170, fig 11.28.

**I92 BARREL PADLOCK** (not illustrated)
winchester, Hampshire.
Mid 13th century.
Padlock case fragment with three transverse straps. L 98mm.
Goodall 1990-21, 1015, no. 3679.

**I93 BARREL PADLOCK**
Somerby, Lincolnshire.
11th–15th century.
Padlock case fragment with transverse straps. L 98mm.
Mynard 1969, 83, fig 12.Iw 71.

**I94 SHACKLE**
**FROM BARREL PADLOCK**
(not illustrated)
winchester, Hampshire.
Late 14th–early 15th century.
Incomplete curved shackle. Expanded end with broken rectangular hole for padlock bolt. L 95mm.
Goodall 1990-21, 1012, no. 3675.

**I95 PADLOCK BOLT**
Castle Acre Castle, n orfolk.
1140s deposit with derived material. Site founded soon after 1066.

T-shaped padlock bolt with single spine with double leaf spring. L 62mm.
Goodall 1082, fig 39, no. 80.

**I96 PADLOCK BOLT**
winchester, Hampshire.
15th–16th century.
T-shaped bolt with semicircular handle and single spine with three springs. L 77mm.
Goodall 1990-21, fig 316.3676.

**I97 PADLOCK BOLT**
Gloucester.
Late 11th, early 12th century.
T-shaped padlock bolt with two spines each with double leaf springs. L 77mm.
Excavated by H Hurst.

**I98 PADLOCK BOLT**
wroughton Copse, Fyfield d own, w iltshire.
12th–13th century.
T-shaped padlock bolt with two spines, each retaining only one spring. More complete spring has rod brazed onto outer face.
L 61mm.
Excavated by P J Fowler.

**I99 PADLOCK BOLT**
Gomeldon, wiltshire.
Second half 13th century.
T-shaped padlock bolt with two spines each with double leaf springs. L 82mm.
Musty and Algar 1986.

**I100 PADLOCK BOLT**
Rhuddlan, Clwyd.
Very late 13th or 14th century.
T-shaped padlock bolt with circular closing plate and two spines each with double leaf springs, one projecting as a looped handle.
L 67mm.
Goodall 1994, fig 17.6, no. 93.

**I101 PADLOCK BOLT**
Cheswick Green, w est Midlands.

13th–14th century.
T-shaped padlock bolt with two spines, each with a double leaf spring, and one projecting as a looped handle. L 78mm.
Jones 1953, 94–95, fig 4.

**I102 PADLOCK BOLT**
Brome, Suffolk.
Mid 14th century.
T-shaped padlock bolt with semicircular handle and two spines, both lacking springs.
L 73mm.
west 1970, 111, fig 12.11.

**I103 PADLOCK BOLT**
Lochmaben Castle, d umfries and Galloway.
Late 14th century.
T-shaped padlock bolt with two spines, each retaining only one spring. L 71mm.
Macdonald and Laing 1974–75, 148, fig 11.22.

**I104 PADLOCK BOLT**
Goltho, Lincolnshire.
Late 14th–early 15th century. In water-pit with slag from smithy.
T-shaped padlock bolt with both spines broken. L 44mm.
Goodall 1975a, 84, fig 39.62.

**I105 PADLOCK BOLT**
wharram Percy, n orth Yorkshire.
Late 15th–early 16th century.
T-shaped padlock bolt with two spines, springs lost. L 54mm.
Goodall 1979a, 115, fig 60.2.

**I106 PADLOCK BOLT**
waltham Abbey, Essex.
13th–16th century. From forge floor.
Closing plate from T-shaped padlock bolt with countersunk holes for two spines.
Probably an incomplete forging. d 36mm.
Goodall 1973a, 170, fig 11.29.

**I107 PADLOCK BOLT**
Faxton, Northamptonshire.

Site: 12th–14th century.
T-shaped padlock bolt with three spines, two retaining springs. L 71mm.
Excavated by L A S Butler.

**I108 PADLOCK BOLT**
Grenstein, Norfolk.
Site: 12th to later 14th, 15th century.
T-shaped padlock bolt with three spines, all with double leaf springs. L 84mm.
Goodall 1980c, fig 79, no. 60.

**I109 PADLOCK BOLT**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
T-shaped padlock bolt with rod and two spines with double leaf springs and projecting looped handles. L 76mm.
Goodall 1975a, 84, fig 39.64.

**I110 PADLOCK BOLT**
Goltho, Lincolnshire.
Late 14th–early 15th century. From smithy floor.
T-shaped padlock bolt with three spines, all with double leaf springs, two projecting to form looped handles. Sectioning showed one of these latter spines to have been inserted into a hole in the closing plate and brazed in place. Metallurgy: closing plate of wrought iron, brass-plated externally. L 74mm.
Goodall 1975a, 84–85, fig 39.60.

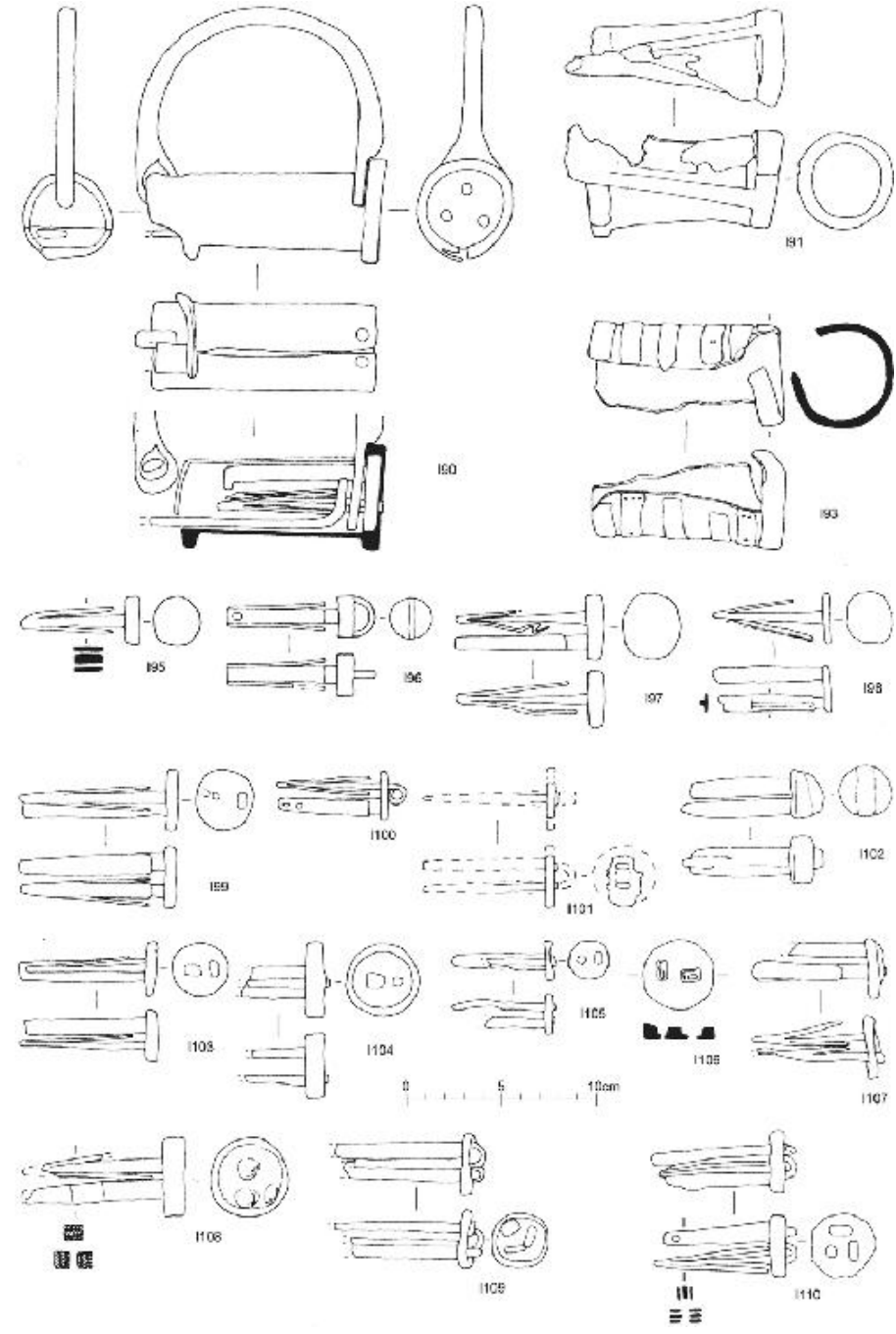



FIGURE 10.11
*Barrel padlocks and padlock bolts*

**I111 PADLOCK BOLT**
Goltho, Lincolnshire.

Late 14th–early 15th century. From smithy floor

T-shaped padlock bolt with three spines all with double leaf springs. Metallurgy: bolt made from wrought iron and at least one spine drawn out from closing plate by forging. Leaves assembled on spine by punching square rivet holes in all three and riveting them together. Much of object brass-plated to reduce corrosion. L 72mm.

Goodall 1975a, 84–85, fig 39.61.

**I112 PADLOCK BOLT**

Goltho, Lincolnshire.

Late 14th–early 15th century. In water-pit with slag from smithy.

T-shaped padlock bolt with two spines, each with double leaf springs and rod. L 65mm.

Goodall 1975a, 84, fig 39.63.

**I113 PADLOCK BOLT**

Cambokeels, d urham.

Later 14th to early 16th century.

T-shaped padlock bolt with two spines with double leaf springs (one incomplete) and a rod. L 76mm.

Hildyard 1949, 199, fig 3.17.

**I114 PADLOCK BOLT**

wharram Percy, n orth Yorkshire.

Late 14th–mid 15th century.

T-shaped padlock bolt with flanged closing plate. Single spine with double leaf spring survives from three original spines.

L 81mm.

Goodall 1979a, 121, fig 64.84.

**I115 PADLOCK BOLT**

Hen Caerwys, Clwyd.

*c*1450–1520.

T-shaped padlock bolt with stubs of three spines. L 55mm.

Excavated by G B Leach.

**I116 PADLOCK BOLT**

Hen Caerwys, Clwyd.

*c*1450–1520.

Closing plate from T-shaped padlock bolt with three spines. d 42mm.

Excavated by G B Leach.

**I117 PADLOCK BOLT**
Huish, Wiltshire.
Site: 12th to mid 15th century.
Closing plate from T-shaped padlock bolt with three spines. d 27mm.
Shortt 1972, 118, fig 2.10.

**I118 PADLOCK BOLT**
Seacourt, Oxfordshire.
Mid to late 12th to late 14th century.
T-shaped padlock bolt with two spines with double leaf springs and two rods. L 69mm.
Biddle 1961–62, 181, fig 31.4, scale 1:4
not 1:3.

**I119 BARREL PADLOCK**
wroughton Copse, Fyfield Down, Wiltshire.
?12th century.
Indeterminate case fragment with straight and wavy longitudinal strips. L 77mm.
Excavated by P J Fowler.

**I120 BARREL PADLOCK**
Weoley Castle, Birmingham, West Midlands.
*c*1080–*c*1200.
Indeterminate case fragment with plain longitudinal rods and copious copper-alloy brazing metal. L 32mm.
Oswald 1962, 129, fig 51.1.

**I121 BARREL PADLOCK** (not illustrated)
Wintringham, Cambridgeshire.
Immediately before mid 13th century.
Indeterminate case fragment with plain
longitudinal straps. L 70mm.
Goodall 1977a, 257, fig 43.18.

**I122 BARREL PADLOck** (not illustrated)
Winchester, Hampshire.
Mid 13th century.
Indeterminate padlock case fragment with projecting longitudinal straps. L 76mm.
Goodall 1990-21, 1015, no. 3680.

**I123 BARREL PADLOCK**
Kettleby Thorpe, Lincolnshire.
14th–early 15th century.
Indeterminate case fragment with longitudinal straps. L 88mm.
Goodall 1974a, 33, fig 18.3.

**I124 PADLOCK BOLT**
Kettleby Thorpe, Lincolnshire.
14th–early 15th century.
Spine and double leaf spring from padlock bolt. Squared U-shaped fitting set at right angles to spine acted as additional barrier to key. L 50mm.
Goodall 1974a, 30, fig 18.2.

**I125 BOX PADLOCK**
Northampton.
12th–14th century.
Box padlock with fin and tube and semicircular projection for revolving key.
Case made from sheet metal plates brazed and held together by U-shaped binding strips. Both long sides decorated by longitudinal straps and wavy and scrolled strips. Projection has damaged keyhole in one side and hole for key tip in other. L 56mm.
Goodall *et al* 1979, 268, fig 116.2.

**I126 BOX PADLOCK WITH SHACKLE**
Winchester, Hampshire.
16th century.
Box padlock with hinged, U-shaped shackle. Keyhole in long side of case with circular mount on inner face of opposing side to engage key tip. U-shaped spring, L-shaped sliding bolt. w 54mm.
Goodall 1990-21, fig 316.3684.

**I127 BOX PADLOCK WITH SHACKle**
Hen Caerwys, Clwyd.
*c*1450–1520.
Box padlock with U-shaped shackle.
Excavated by G B Leach.

**I128 BOX PADLOCK WITH SHACKLE**
Norwich, Norfolk.
In 1507 fire deposit.
Box padlock with U-shaped shackle.

L 39mm.
Goodall 1993d, fig 115.1240.

**I129 PADLOCK SHACKLE**
Staines, Surrey.
1300–1500.
Hinged, U-shaped shackle, one end broken.
L 62mm.
Excavated by K Crouch.

**I130 PADLOCK SHACKLE**
Bayham Abbey, East Sussex.
Late 15th–early 16th century.
Hinged, U-shaped shackle, one end broken.
L 68mm.
Goodall 1983a, fig 46.44.

**I131 EMBOSSED PADLOCK**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Case and backplate damaged. W 63mm.
Goodall 1975a, 84, fig 39.65.

**I132 EMBOOSED PADLOCK**
Waltham Abbey, Essex.
Second half 15th century.
Case fragment retaining part of lock mechanism. w 51mm.
Excavated by P J Huggins.

**I133 STAPLED PADLOCK HASP**
Lyveden, Northamptonshire.
Second quarter 13th to very early 14th century.
One arm broken, staple in other blocked.
L 108mm.
Bryant and Steane 1969, 40, fig 18g.

**I134 STAPLED PADLOCK HASP**
Brooklands, Weybridge, Surrey.
1200–1325.
Both arms broken, staple lost. L 72mm.
Goodall 1977d, 73–75, fig 45.23.

**I135 STAPLED PADLOCK HASP**
Rhuddlan, Clwyd.
14th century,?earlier part, or conceivably 1290–1300.
One arm lost. L 90mm.
Goodall 1994, fig 17.6, no. 94.

**I136 STAPLED PADLOCK HASP**
Grenstein, Norfolk.
Late 14th–15th centuries.
One arm and staple broken. L 114mm.
Goodall 1980c, fig 79, no. 62.

**I137 STAPLED PADLOCK HASP**
Newbury, Berkshire.
Late 15th century.
One arm broken. L 102mm.
Goodall 1997, fig 20, no. 28.

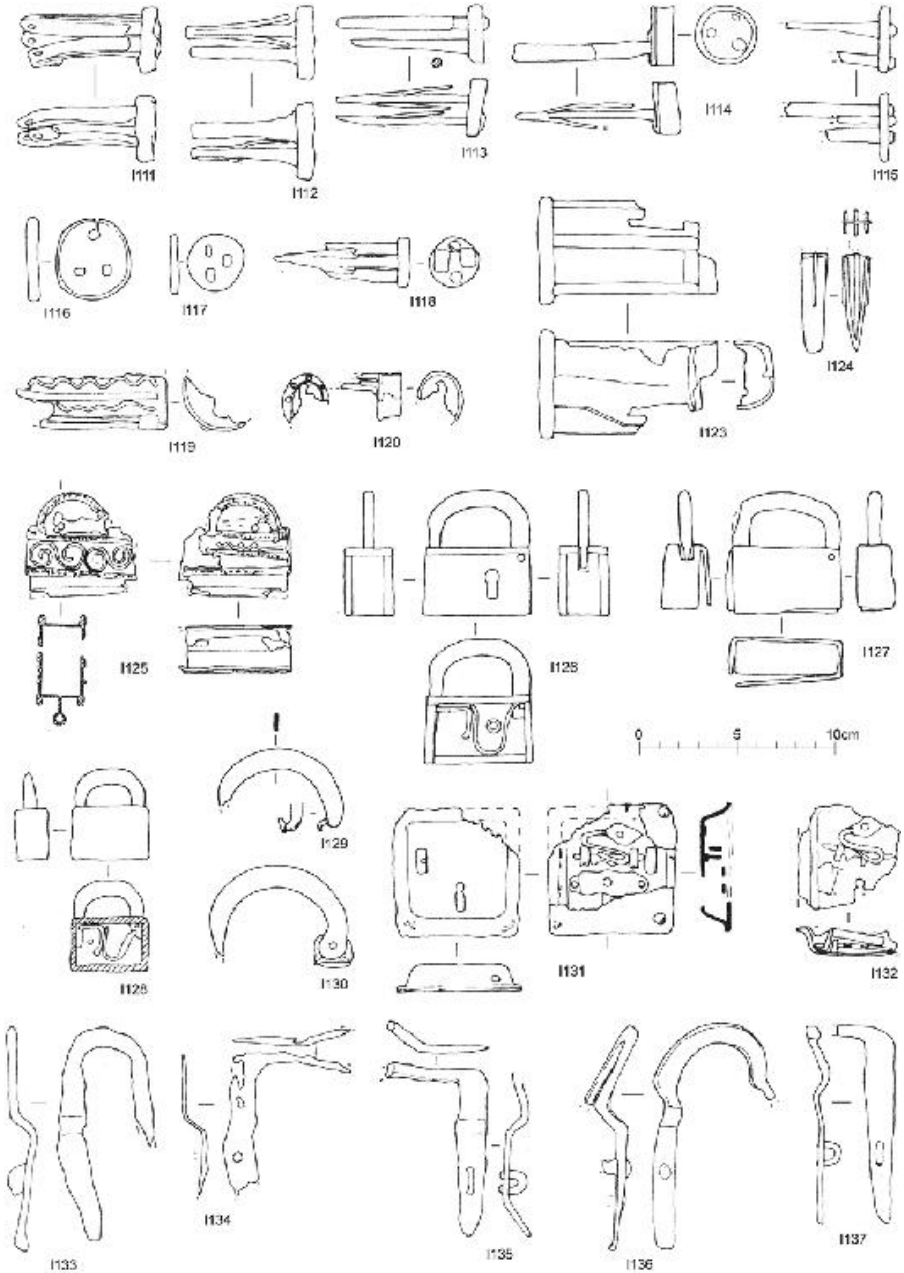



FIGURE 10.12

*Padlock bolts, barrel padlocks, box padlocks, padlock shackles, embossed padlocks, and stapled padlock hasps*

**I138 EMBOSSED PADLOCK**

Writtle, Essex.

*c*1425–1521.

Case and backplate broken. W 85mm.

Rahtz 1969b, 85, fig 47, 48.

**I139 EMBOSSED PADLOCK**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
Case, near complete, retains stapled
U-shaped hasp. W 63mm.
Goodall 1980a, 509, fig 265.10.

**I140 STAPLED PADLOCK HASP**
Hadleigh Castle, Essex.
16th century.
Base of one arm broken. L 76mm.
Goodall 1975c, 141, fig 28.340.

**I141 EMBOSSED PADLOCK**
Huish, Wiltshire.
Site: 12th–15th century.
Flange damaged. W 86mm.
Shortt 1972, 118, fig 2.12.

**I142 LOCK**
Winchester, Hampshire.
Mid to late 13th century.
Broken flat lockplate with shaped keyhole and hole for staple of hasp. Toothed bolt with recurved end, secured by spring, slides in two U-shaped staples. Broken mount for key tip. W 48mm.
Goodall 1990-21, fig 321.3688.

**I143/H565 LOCK**
**AND S TA PLED LOCK HASP**
Upton, Gloucestershire.
Late 13th to late 14th century.
Broken flat lockplate retaining end of toothed bolt corroded through stapled of looped hasp. W 30mm.
Hilton and Rahtz 1966, 120, fig 13.6.

**I144 LOCK** (not illustrated)
Winchester, Hampshire.
14th–?15th century.
Broken flat lockplate retaining straight toothed bolt and little else. L 72mm.

Goodall 1990-21, 1017, no. 3690.

**I145 LOCK**
Newbury, Berkshire.
Late 15th century.
Broken flat lockplate with two elongated guides for hasps and marks of outer straps on front face, as well as keyhole and holes for staples of hasps. Lock mechanism on rear comprises toothed bolt with recurved end secured by spring and sliding in two U-shaped staples, L-shaped ward, and shaped mount with inner collar and hole for key tip. L 108mm.
Goodall 1997, fig 20, no. 26.

**I146 LOCK**
Winchester, Hampshire.
Early 12th century.
d ished rectangular lock case with edge binding strips with nail-holes and one nail.
Lock mechanism on rear face of projecting case comprises toothed straight bolt, tumbler, one L-shaped and two cross-shaped wards, two collars and a mount for the key tip.
L 180mm.
Goodall 1990-21, fig 319.3687.

**I147 KEY TIP MOUNT** (not illustrated)
Winchester, Hampshire.
Late 13th–early 14th century.
Shaped mount with hole for key tip, fixing plates broken. Similar to mount in **I128**, but without a collar. L 51mm.
Goodall 1990-21, 1017, no. 3689.

**I148 KEYTIP MOUNT**
Northampton.
*c*1250 to end 14th century.
Broken and distorted shaped mount with central recess bearing two concentric collars. L 166mm.
Goodall *et al* 1979, 268, fig 116.7.

**I149 LOCK BOLT**
Northampton.
12th–13th century.
One end distorted. L 78mm.

Goodall 1979b, 71, fig 17.9.

**I150 LOCK BOLT**
Joyden's Wood, kent.
Late 13th, early 14th century.
Complete bolt. L 296mm.
Dunning 1959, 30–31, fig 4.30.

**I151 LOCK BOLT**
Northolt Manor, Greater London.
*c*1300.
Distorted bolt with recurved end. L 187mm.
Excavated by J G Hurst.

**I152 LOCK BOLT**
Southampton, Hampshire.
1300–50.
Broken mid length and at one end, other end recurved. L 236mm.
Harvey 1975b, 285, fig 255.2077.

**I153 TUMBLER**
Rhuddlan, Clwyd.
Mid 13th century.
Stem broken, fixing plate lost. L 78mm.
Goodall 1994, fig 17.1, no. 96.

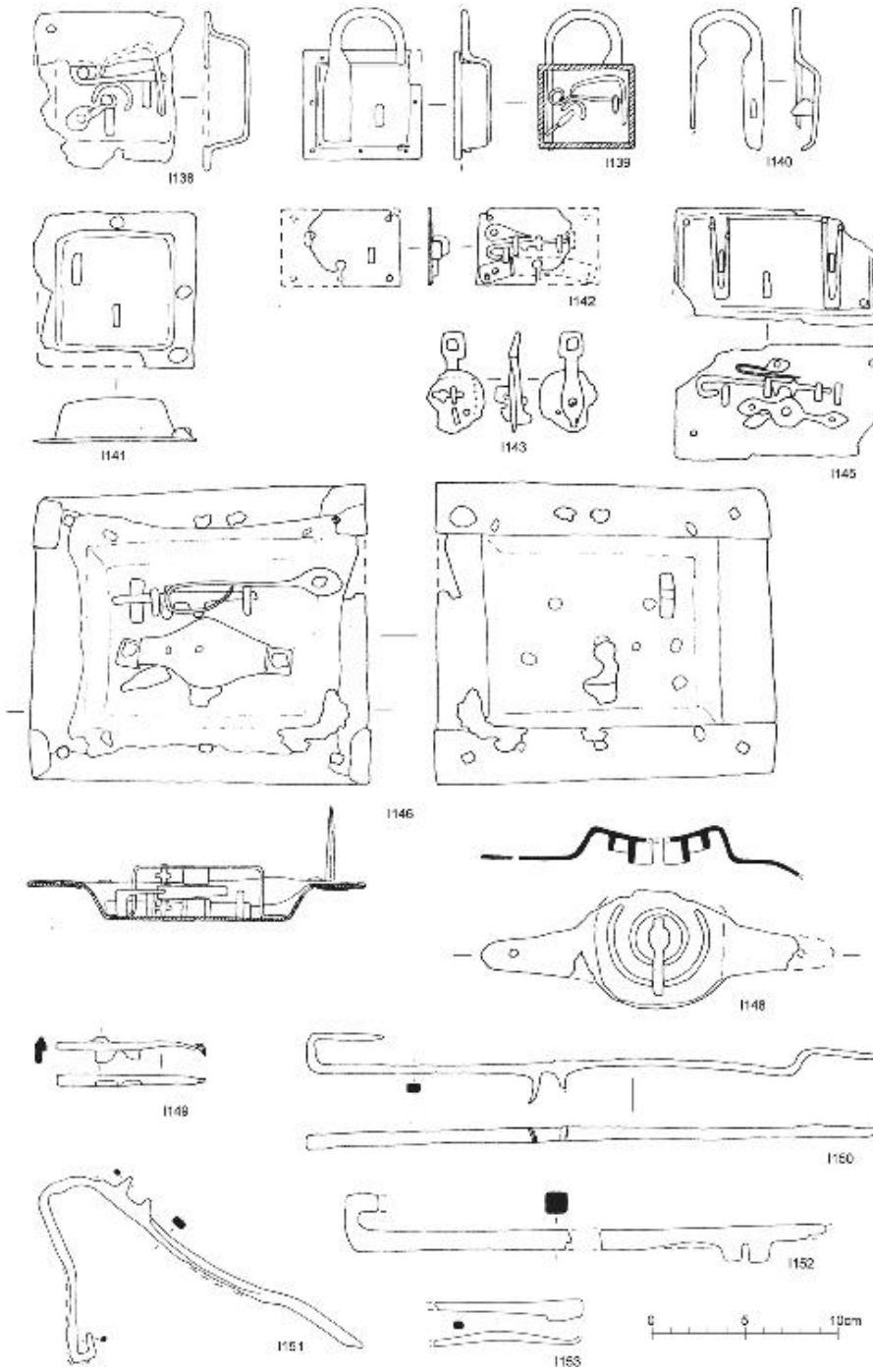



FIGURE 10.13
*Embossed padlocks, stapled padlock hasps, locks, key tip mount, lock bolts, and tumbler*

## I154 LOCK BOLT

Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Damaged. L 138mm.
O'Neil 1944–45.

**I155 LOCK BOLT**
Stonar, k ent.
13th–14th century derived.
One end broken. L 161mm.
Excavated by n Macpherson-Grant.

**I156 LOCK BOLT**
North Elmham Park, n orfolk.
*c*1150 –*c*1600.
One end broken. L 114mm.
Goodall 1980a, 510, fig 265.16.

**I157 LOCK BOLT**
Winchester, Hampshire.
15th century.
Complete. L 252mm.
Goodall 1990-21, fig 321.3692.

**I158 LOCK BOLT** (not illustrated)
Stonar, Kent.
*c*1275–1385.
One end broken. L 167mm.
Excavated by n Macpherson-Grant.

**I159 LOCK BOLT** (not illustrated)
Stonar, Kent.
*c*1275–1385.
One end broken. Found with part of lockplate. L 175mm.
Excavated by n Macpherson-Grant.

**I160 LOCK BOLT**
Clarendon Palace, Wiltshire.
Site: *c*1072 to late 15th century.
One end broken. L 96mm.
Goodall 1988, fig 79.79; Borenius and Charlton 1936.

**I161 LOCK BOLT**

Kettleby Thorpe, Lincolnshire.
12th to early 15th century.
Both ends broken. L 94mm.
Goodall 1974a, 33, fig 18.6.

**I162 LOCK BOLT**
Clarendon Palace, w iltshire.
Site: *c*1072 to later 15th century.
One end broken. L 146mm.
Goodall 1988, fig 79.80; Borenius and Charlton 1936.

**I163 LOCK BOLT**
Clarendon Palace, w iltshire.
Site: *c*1072 to later 15th century.
One end broken. L 229mm.
Goodall 1988, fig 79.76. Borenius and Charlton 1936.

**I164 LOCK BOLT**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15t cent ur y.
One end curved round, other broken. L 143mm.
Goodall 1975a, 84, fig 39.57.

**I165 LOCK BOLT**
Clarendon Palace, w iltshire.
Site: *c*1072 to later 15th century.
Complete. L 222mm.
Goodall 1988, fig 79.77; Borenius and Charlton 1936.

**I166 LOCK BOLT**
Clarendon Palace, w iltshire.
Site: *c*1072 to later 15th century.
Complete. L 156mm.
Goodall 1988, fig 79.78; Borenius and Charlton 1936.

**I167 TUMBLER**
Barrow Mead, Avon.
13th–14th century.
Broad end broken. L 83mm.
Goodall 1976b, 35, fig 11.21.

**I168 TUMBLER**

Ospringe, k ent.
Demolition *c*1550–70 on site founded *c*1230.
One end broken. L 60mm.
Goodall 1979c, 132, fig 21.77.

**I169 WARD**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Plain ward. L 89mm.
Goodall 1977f, 46, iron object fig 1.9.

**I170 WARD**
Hen Caerwys, Clwyd.
*c*1450–1520.
Plain ward, complete end shaped. L 68mm.
Excavated by G B Leach.

**I171 WARD**
Hen Caerwys, Clwyd.
*c*1450–1520.
Plain ward, one end broken. L 69mm.
Excavated by G B Leach.

**I172 WARD**
London.
Late 15th–early 16th century.
Plain ward. L 87mm.
Excavated by F C w illmot. Site at 66 Foyle Road.

**I173 WARD**
Waltham Abbey, Essex.
16th century.
Plain ward. L 80mm.
Goodall 1973a, 171, fig 11.34.

**I174 WARD**
Waltham Abbey, Essex.
16th century.
Plain ward, one end broken. L 93mm.
Goodall 1973a, 171, fig 11.33.

**I175 WARD**

Wharram Percy, n orth Yorkshire.
Early 16th to 20th century.
Both ends broken, top shaped. L 90mm.
Goodall 1979a, 121, fig 64.85.

**I176 WARD**
Glastonbury Tor, Somerset.
12th–16th century.
Incomplete ward with single pin. L 89mm.
Rahtz 1970, 53, fig 23.17.

**I177 WARD**
Waltham Abbey, Essex.
16th century.
Ward with collar. L 114mm.
Goodall 1973a, 171, fig 11.32.

**I178 PADLOCK KEY**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Plain stem broken across base of looped terminal. Bit broken. L 53mm.
Goodall 1977f, 46, iron object fig 1.5.

**I179 PADLOCK KEY**
Goltho Manor, Lincolnshire.
Probably mid 12th century; site occupied since 8th century.
Plain stem with looped terminal. L 107mm.
Goodall 1987, fig 158.114.

**I180 PADLOCK KEY**
Winchester, Hampshire.
13th century.
Plain stem with looped terminal. L 73mm.
Goodall 1990-21, fig 324.3730.

**I181 PADLOCK KEY**
Seacourt, Oxfordshire.
First quarter 13th century.
Plain stem with looped terminal and projection immediately above bit. L 94mm.
Biddle 1961–62, 180, fig 31.1, scale 1:4, not 1:3.

**I182 PADLOCK KEY**
Totnes, Devon.
Mid 13th century.
Plain stem, looped terminal. L 70mm.
Rigold 1954, 254, fig 8.8c.

**I183 PADLOCK KEY**
Bedford.
13th century.
Plain stem with looped terminal, bit lost.
L 64mm.
Baker *et al* 1979, 281, fig 176.1427.

**I184 PADLOCK KEY**
Brandon Castle, w arwickshire.
13th century.
Plain stem with broken looped terminal.
L 133mm.
Chatwin 1955, 83, fig 12.5.

**I185 PADLOCK KEY**
Winchester, Hampshire.
Late 11th–early 12th century.
Swollen stem with incised decorative grooves and broken looped terminal.
Non-ferrous plating. L 90mm.
Goodall 1990-21, fig 324.3727.

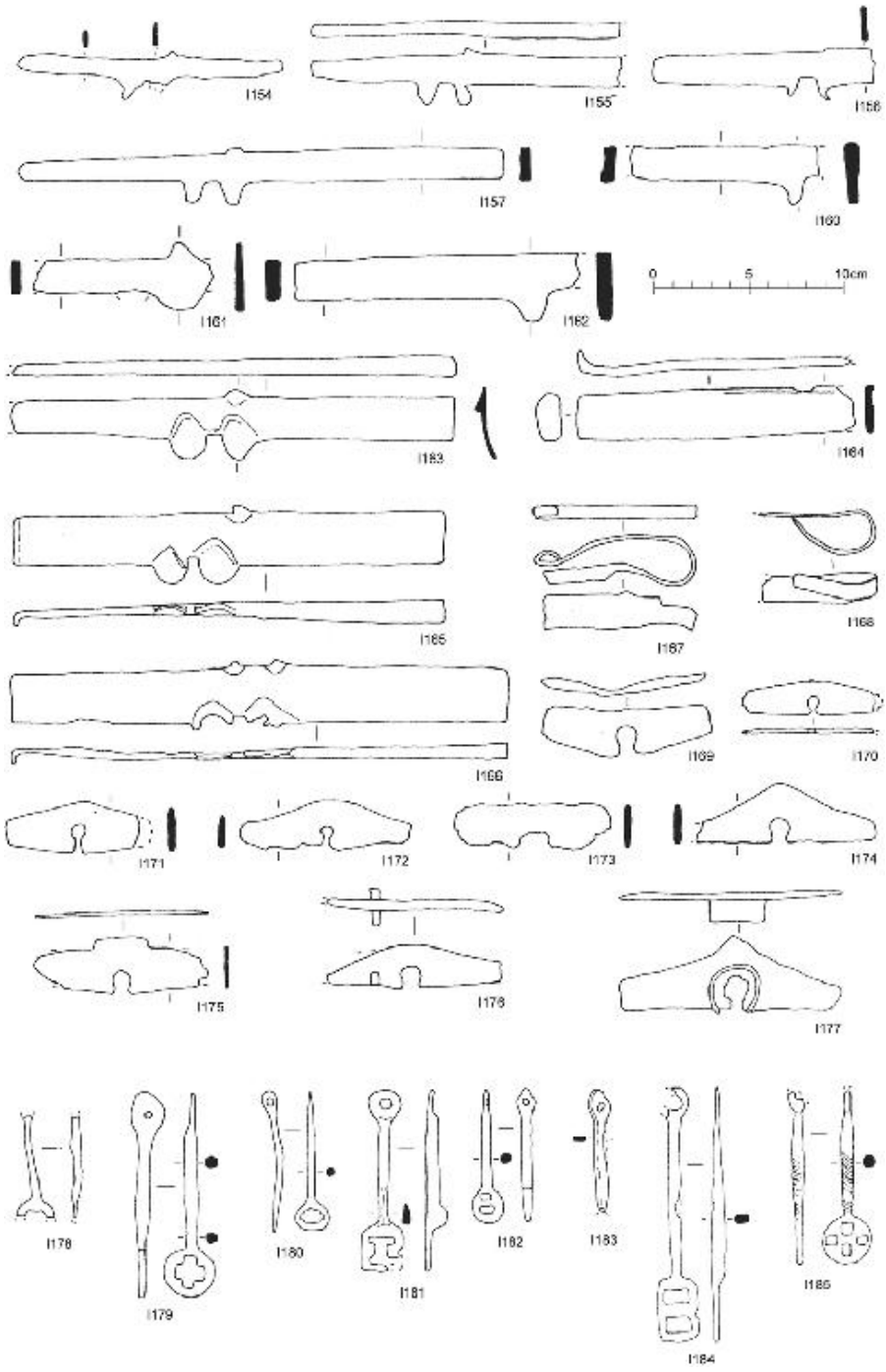



FIGURE 10.14
*Lock bolts, tumblers, wards and padlock key.*

## I186 PADLOCK KEY

Winchester, Hampshire.
Late 11th century.
Swollen stem broken across base of looped terminal. L 98mm.
Goodall 1990-21, fig 324.3725.

**I187 PADLOCK KEY** (not illustrated)
Winchester, Hampshire.
Early 12th century.
Swollen stem broken across base of loop terminal. Base missing from bit with three rectangular ward cuts. L 72mm.
Goodall 1990-21, 1024, no. 3728.

**I188 PADLOCK KEY**
Goltho Manor, Lincolnshire.
*c*110 0 –25
Swollen stem with spirally inlaid copper-alloy wire. Broken looped terminal and bit.
L 99mm.
Goodall 1987, fig 158.112.

**I189 PADLOCK KEY**
Winchester, Hampshire.
*c*1130.
Swollen stem with spirally inlaid nonferrous wire. Broken ring through looped terminal.
L 124mm.
Goodall 1990-21, fig 324.3726.

**I190 PADLOCK KEY** (not illustrated)
Goltho Manor, Lincolnshire.
*c*110 0 –50.
Swollen stem inlaid with copper-alloy wire.
Looped terminal and bit both broken. L
77mm.
Goodall 1987, 183.

**I191 PADLOCK KEY**
Castle Acre Castle, Norfolk.
1140s–50s with derived material. Site founded soon after 1066.
Swollen stem with looped terminal and damaged bit. L 85mm.
Goodall 1982, fig 40, no. 82.

**I192 PADLOCK KEY**
Castle Acre Castle, Norfolk.
1140s with derived material. Site founded soon after 1066.
Swollen stem with spirally inlaid nonferrous wire and looped terminal. L 104mm.
Goodall 1982, fig 40, no. 84.

**I193 PADLOCK KEY**
Castle Acre Castle, Norfolk.
1140s to second half 12th century with derived material. Site founded soon after 1066.
Swollen stem with spirally inlaid nonferrous wire. Looped terminal with ring. L 100mm.
Goodall 1982, fig 40, no. 85.

**I194 PADLOCK KEY**
Castle Acre Castle, Norfolk.
1140s to second half 12th century.
Swollen stem with looped terminal.
Non-ferrous plating. L 94mm.
Goodall 1982, fig 40, no. 81.

**I195 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Second half 12th century.
Swollen stem with spirally inlaid nonferrous wire. Looped terminal broken. L 65mm.
Goodall 1982, fig 40, no. 88.

**I196 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Second half 12th century.
Swollen stem with looped terminal; bit broken. L 80mm.
Goodall 1982, fig 40, no. 83.

**I197 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Second half 12th century.
Swollen stem with spirally inlaid nonferrous wire. Looped terminal with broken ring.
L 85mm.
Goodall 1982, fig 40, no. 87.

**I198 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Second half 12th century.
Swollen stem with spirally inlaid nonferrous wire. Looped terminal, broken bit. L 91mm.
Goodall 1982, fig 40, no. 86.

**I199 PADLOCK KEY**
Winchester, Hampshire.
*c*1138 –*c*1154.
Swollen stem with incised decorative grooves, looped terminal and non-ferrous plating. L 72mm.
Goodall 1990-21, fig 324.3729.

**I200 PADLOCK KEY**
Hen Domen, Powys.
After 1200, probably before 1250.
Swollen stem with looped terminal. Bit broken. L 83mm.
Barker and Higham 2000.

**I201 PADLOCK KEY**
Faxton, Northamptonshire.
Site: 12th–15th century.
Swollen stem. Looped terminal and bit broken. L 54mm.
Excavated by L A S Butler.

**I202 PADLOCK KEY**
Staines, Surrey.
Medieval, to 15th century.
Swollen stem with looped terminal. L
114m m.
Barker 1976, 124, fig 26.27.

**I203 PADLOCK KEY**
King's Lynn, Norfolk.
*c*1250–1350(?).
Swollen stem with incised decorative grooves and hooked-loop terminal. Shaped bit.
L 119mm.
Goodall and Carter 1977, 293, fig 133.7.

**I204 PADLOCK KEY**

Llantrithyd, South Glamorgan.
Early to mid 12th century.
Short plain stem expanding to perforated tip. Incised decoration on expanded part of stem. Non-ferrous plating. L 117mm.
Goodall 1977f, 46, iron object fig 1.4.

**I205 PADLOCK KEY**
Brooklands, Surrey.
1200–1325.
Short plain stem with rear projection expanding to perforated tip. L 102mm.
Goodall 1977d, 73, fig 45.21.

**I206 PADLOCK KEY**
Walton, Aylesbury, Buckinghamshire.
12th century.
Plain stem with looped terminal. L 146mm.
Cocks 1903–09, 285–286, fig on p 285.

**I207 PADLOCK KEY**
Wroughton Copse, Fyfield Down, Wiltshire.
?12th century.
Plain stem, upper part thickened. Broken looped terminal and bit. L 119mm.
Excavated by P J Fowler.

**I208 PADLOCK KEY**
Brandon Castle, Warwickshire.
1226–66.
Plain stem with double looped terminal.
L 116mm.
Chatwin 1955, 83, fig 12.1.

**I209 PADLOCK KEY**
Stonar, Kent.
*c*1275–1385.
Plain stem with looped terminal. Non-ferrous plating. L 96mm.
Excavated by N Macpherson-Grant.

**I210 PADLOCK KEY**
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.

Plain stem with hooked-loop terminal.
L 119mm.
Reader 1913, 168, pl d .2; Helliwell and Macleod 1965.

**I211 PADLOCK KEY**
Weoley Castle, Birmingham, West
Midlands.
Site: *c*1080 –1500.
Expanded stem with hooked terminal. Bit damaged. L 150mm.
Birmingham City Museum, WC417. For site see Oswald 1962.

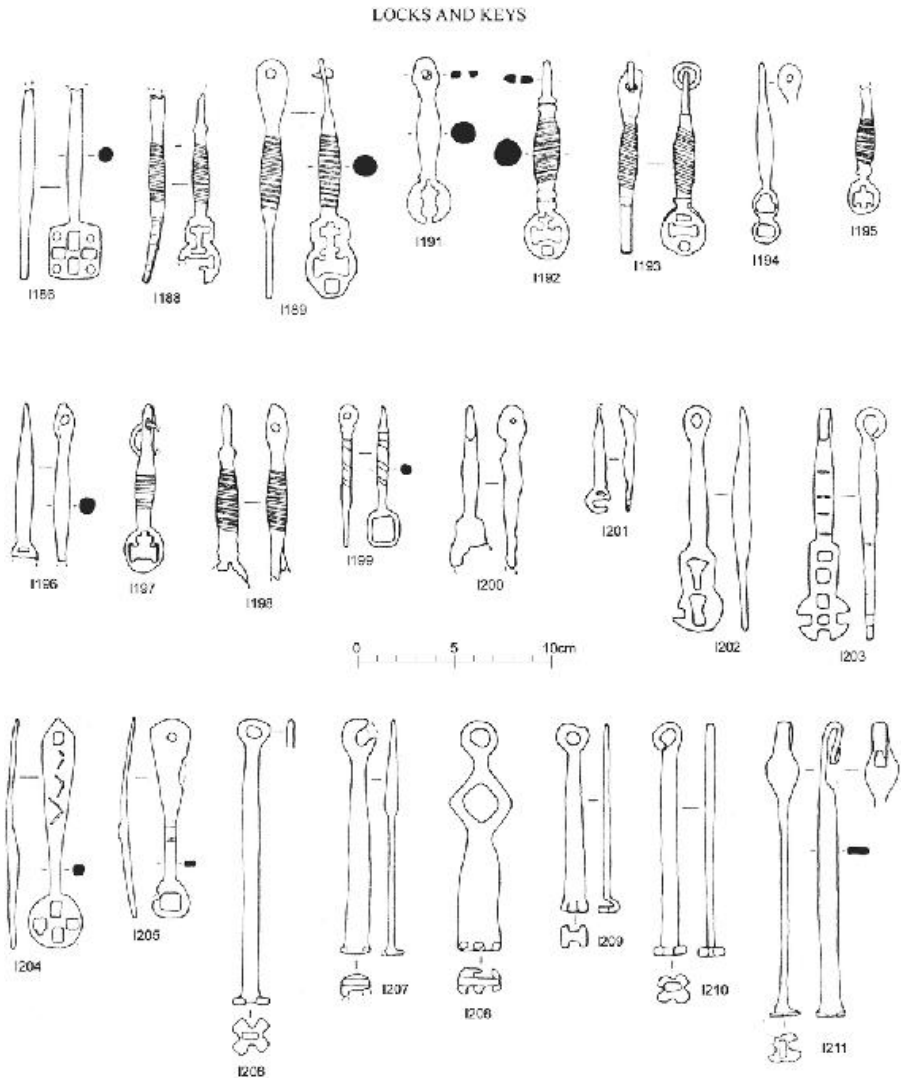



FIGURE 10.15
*Padlock keys*

**I212 PADLOCK KEY**
Castle Urquhart, Highlands.
Site: 12th–17th century.
Plain stem broken. L 104mm.
Laing 1974–75, 155, fig 14.15.

**I213 PADLOCK KEY**
Thelsford Priory, Warwickshire.
14th century.
Bulbous stem with looped terminal. L 58mm.
Excavated by Mrs M Gray.

**I214 PADLOCK KEY**
Southampton, Hampshire.
1125 –50.
Plain stem with looped terminal. L 95mm.
Harvey 1975b, 276, fig 250.1965.

**I215 PADLOCK KEY**
Ellington, Cambridgeshire.
Second or third quarter 12th to late 13th cent ur y.
Plain stem narrowing to looped terminal.
L 123mm.
Goodall 1971, 67, fig 12.1.

**I216 PADLOCK KEY**
Hen Domen, Powys.
After 1200, probably before 1250.
Plain stem, upper part thickened. Looped terminal. L 107mm.
Higham and Rouillard 2000, no. 82.

**I217 PADLOCK KEY**
Northolt Manor, Greater London.
1225–1300.
Plain stem, upper part thickened. Looped terminal. L 122mm.
Hurst 1961, 289, fig 76.4.

**I218 PADLOCK KEY**
Seacourt, Oxfordshire.
Mid 13th century.
Plain stem with looped terminal. L 120mm.
Biddle 1961–62, 180, fig 31.2, scale 1:4 not 1:3.

**I219 PADLOCK KEY**
Winchester, Hampshire.
?13th century.
Plain stem with looped terminal. L 102mm.
Goodall 1990-21, fig 323.3724.

**I220 PADLOCK KEY**
Brandon Castle, Warwickshire.
13th century.
Plain stem, upper part thickened, broken across base of looped terminal. L 95mm.
Chatwin 1955, 83, fig 12.4.

**I221 PADLOCK KEY**
Grenstein, Norfolk.
Late 14th–15th century.
Plain, boken stem. L 105mm.
Goodall 1980c, fig 79, no. 59.

**I222 PADLOCK KEY**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Plain stem with looped terminal. L 106mm.
Goodall 1988, fig 78.66; Borenius and Charlton 1936.

**I223 PADLOCK KEY**
writtle, Essex.
Site: 1211–1521 with later material.
Plain stem with looped terminal. L 95mm.
Rahtz 1969b, 85, fig 47.45.

**I224 PADLOCK KEY**
Writtle, Essex.
*c*1425–1521 but mixed with later levels.
Plain stem with looped terminal. L 105mm.
Rahtz 1969b, 85, fig 47.45.

**I225 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Second half 12th century.
Plain stem with hooked-loop terminal.

L 116mm.
Goodall 1982, fig 40, no. 90.

**I226 PADLOCK KEY**
Winchester, Hampshire.
Late 12th–early 13th century.
Plain stem with hooked-loop terminal.
L 133mm.
Goodall 1990-21, fig 323.3710.

**I227 PADLOCK KEY**
Walton, Aylesbury, Buckinghamshire.
12th century.
Plain stem with hooked terminal. L 136mm.
Cocks 1903–09, 286; w ard Perkins 1967, 148, fig 45.2.

**I228 PADLOCK KEY**
Lyveden, Northamptonshire.
Second quarter 13th century.
Plain shank with hooked-loop terminal.
L 130mm.
Bryant and Steane 1971, 63, fig 16.n.

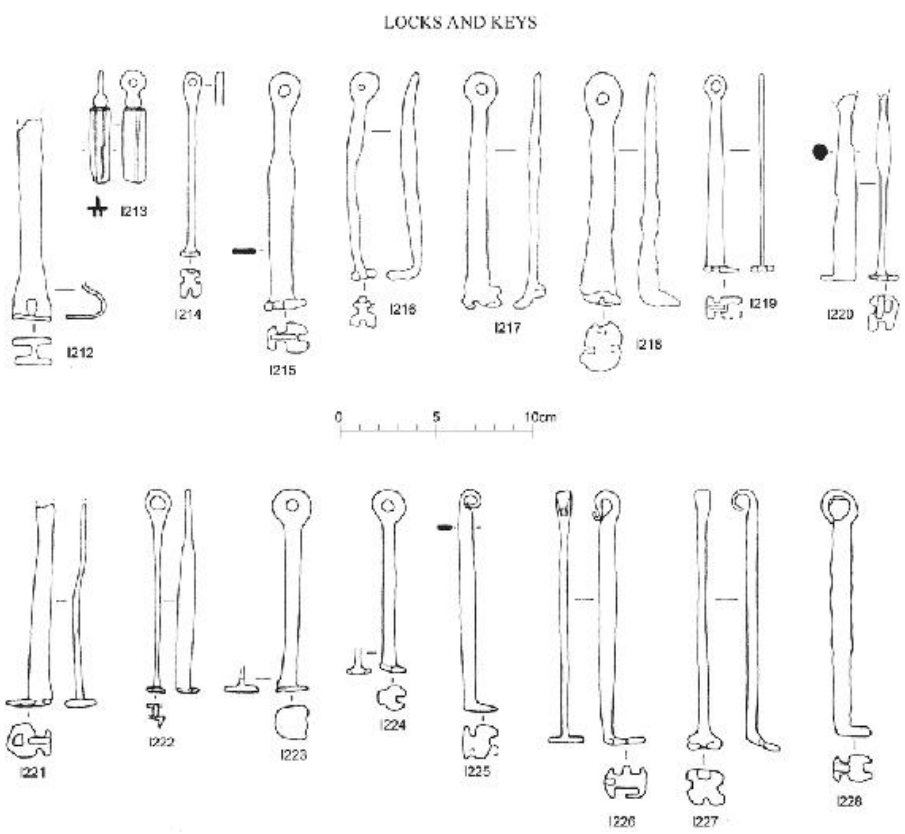



FIGURE 10.16
*Padlock keys*

**I229 PADLOCK KEY**
Winchester, Hampshire.
Late 10th–late 11th century.
Expanded stem with hooked terminal.
L 149mm.
Goodall 1990-21, fig 322.3705.

**I230 PADLOCK KEY**
Winchester, Hampshire.
Late 10th–late 11th century.
Expanded stem with broken hooked terminal. L 172mm.
Goodall 1990-21, fig 322.3704.

**I231 PADLOCK KEY**
Sulgrave, Northamptonshire.
End 11th to early 12th century.
Expanded stem, hooked terminal and bit broken. L 155mm.

Excavated by B k Davison.

**I232 PADLOCK KEY**
Winchester, Hampshire.
15th century.
Broken expanded stem. L 97mm.
Goodall 1990-21, fig 323.3720.

**I233 PADLOCK KEY**
Winchester, Hampshire.
Late 13th century.
Expanded stem, hooked terminal, broken bit, L 136mm.
Goodall 1990-21, fig 323.3713.

**I234 PADLOCK KEY**
Brandon Castle, Warwickshire.
13th century.
Expanded stem, hooked terminal lost.
L 147mm.
Chatwin 1955, 83, fig 12.6.

**I235 PADLOCK KEY**
Copt Hay, Tetsworth, Oxfordshire.
Late 13th–14th century.
Expanded stem, with hooked terminal.
L 115mm.
Robinson 1973, 104, fig 25.10.

**I236 PADLOCK KEY**
Criccieth Castle, Gwynedd.
Site: *c*1220 –1404.
Expanded stem with hooked terminal.
L 150mm.
O'Neil 1944–45, 41, pl IX.8.

**I237 PADLOCK KEY**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Expanded stem with distorted and incomplete hooked terminal. L 178mm.
Goodall 1988, fig 78.67; Borenius and Charlton 1936.

**I238/I16 PADLOCK KEY**

Winchester, Hampshire.
Late 14th century.
Incomplete and corroded key, found in barrel padlock **I16**. L 29mm.
Goodall 1990-21, fig 311.3652.

**I239 PADLOCK KEY** (not illustrated)
Winchester, Hampshire.
14th century.
Bit as **I232**. L 77mm.
Goodall 1990-21, 1022, no. 3718.

**I240 PADLOCK KEY** (not illustrated)
Seacourt, Oxfordshire.
Mid to late 12th to mid 14th century.
L 78mm. Bit as **I218**.
Biddle 1961–62, 181, fig 31.3.

**I241 PADLOCK KEY** (not illustrated)
Huish, Wiltshire.
Site: 12th to mid 15th century.
Bit as **I232**. L 72mm.
Shortt 1972, 118, fig 2.11.

**I242 PADLOCK KEY** (not illustrated)
Castle Acre Castle, Norfolk.
Second half 12th century.
Plain stem with looped terminal. L 124mm.
Goodall 1982.

**I243 PADLOCK KEY**
Castle Acre Castle, Norfolk.
1140s/50s with derived material. Site founded soon after 1066.
Expanded stem with broken looped terminal set in opposing plane. L 83mm.
Goodall 1982, fig 40, no. 93.

**I244 PADLOCK KEY** (not illustrated)
Castle Acre Castle, Norfolk.
Second half 12th century.
Expanded stem with looped terminal set in opposing plane. L 101mm.
Goodall 1982.

**I245 PADLOCK KEY**
Winchester, Hampshire.
15th century.
Expanded stem with looped terminal set in opposing plane. Bit broken. L 120mm.
Goodall 1990-21, fig 323.3721.

**I246 PADLOCK KEY**
Winchester, Hampshire.
Late 10th–late 11th century.
Expanded stem with hooked terminal.
L 148mm.
Goodall 1990-21, fig 322.3703.

**I247 PADLOCK KEY**
Winchester, Hampshire.
Late 10th–late 11th century.
Expanded stem with hooked terminal.
L 166mm.
Goodall 1990-21, fig 323.3706.

**I248 PADLOCK KEY**
Gloucester.
11th to early 12th century.
Expanded stem with broken hooked terminal. L 151mm.
Excavated by H Hurst.

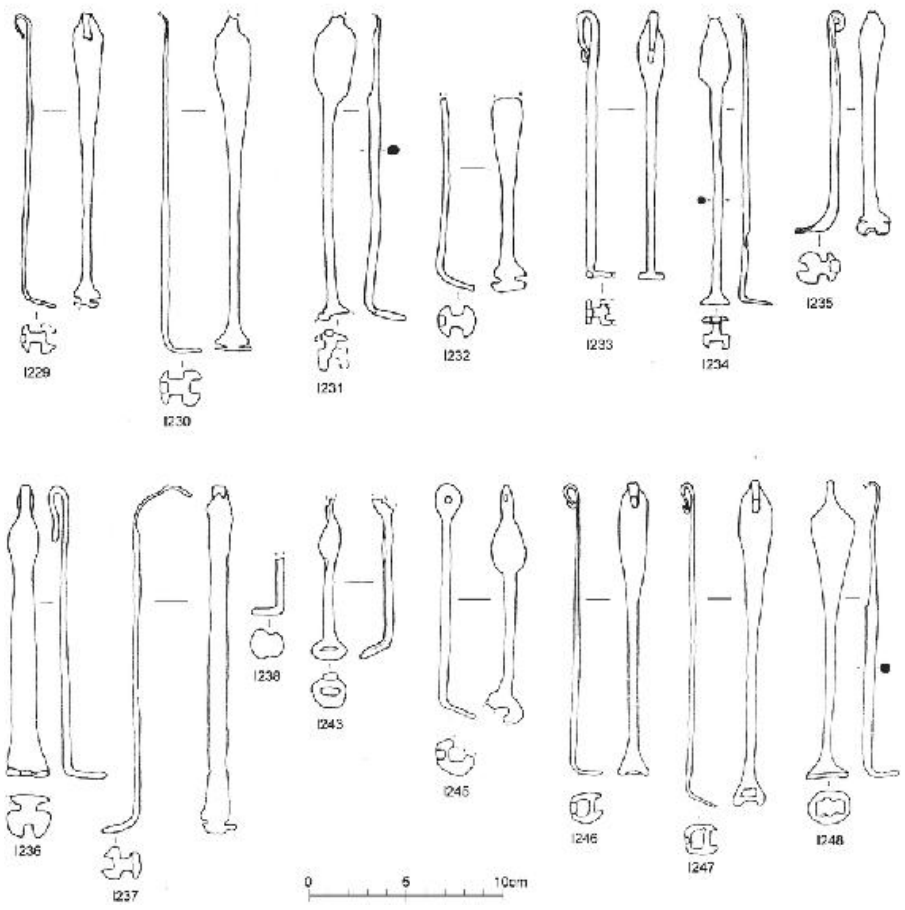



FIGURE 10.17
*Padlock keys*

**I249 PADLOCK KEY**
Gloucester.
11th to early 12th century.
Expanded stem with hooked terminal.
L 220mm.
Excavated by H Hurst.

**I250 PADLOCK KEY** (not illustrated)
Winchester, Hampshire.
Late 11th–12th century.
Expanded stem with hooked terminal. Bit incomplete. L 93mm.
Goodall 1990-21, 1022, no. 3709.

**I251/I83 PADLOCK KEY**
Winchester, Hampshire.
11th century.
Key with expanded stem and hooked terminal, found with barrel padlock with shackle and bolt **I83**. L 169mm.
Goodall 1990-21, fig 315.3674.

**I252 PADLOCK KEY**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Expanded stem with hooked terminal.
L 142mm.
Goodall 1977f, 46, iron object fig 1.2.

**I253 PADLOCK KEY**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Expanded stem, hooked terminal and bit both broken. L 145mm.
Goodall 1977f, 46, iron object fig 1.1.

**I254 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Second half 12th century.
Expanded stem with hooked terminal.
L 137mm.
Goodall 1982, fig 40, no. 97.

**I255 PADLOCK KEY**
Castle Acre Castle, Norfolk.
Last quarter 12th century.
Expanded stem with hooked terminal. Bit incomplete.
Goodall 1982, fig 40, no. 98.

**I256 PADLOCK KEY**
King's Lynn, Norfolk.
*c*1150–1250.
Expanded stem with hooked terminal.
L 139mm.
Goodall and Carter 1977, 293, fig 133.5.

**I257 PADLOCK KEY**
Cheddar, Somerset.

Early 13th century.
Expanded stem, hooked terminal and bit broken. L 115mm.
Goodall 1979d, 264, fig 90.143.

**I258 PADLOCK KEY**
Christchurch, Hampshire.
?13th century.
Expanded stem, hooked terminal and bit
broken. L 103mm.
Goodall 1983b, fig 34.47.

**I259 PADLOCK KEY**
Winchester, Hampshire.
13th century.
Expanded stem with hooked terminal.
L 142mm.
Goodall 1990-21, fig 323.3716.

**I260 PADLOCK KEY**
Winchester, Hampshire.
13th century.
Expanded stem with hooked terminal.
L 143mm.
Goodall 1990-21, fig 323.3715.

**I261 PADLOCK KEY**
Brandon Castle, Warwickshire.
13th century.
Expanded stem, hooked terminal and bit broken. L 173mm.
Chatwin 1955, 83, fig 12.7.

**I262 PADLOCK KEY**
Brandon Castle, warwickshire.
13th century.
d istorted key with expanded stem and broken hooked terminal and bit. L 204mm.
Herbert Art Gallery and Museum, Coventry.
For site see Chatwin 1955.

**I263 PADLOCK KEY**
King's Lynn, Norfolk.
*c*1250–1350(?).

Expanded stem with broken hooked terminal. L 129mm.
Goodall and Carter 1977, 293, fig 133.6.

**I264 PADLOCK KEY**
Upton, Gloucestershire.
Late 13th to late 14th century.
Expanded stem with hooked terminal.
L 177mm.
Hilton and Rahtz 1966, 120, fig 13.2.

**I265 PADLOCK KEY**
Upton, Gloucestershire.
Late 13th to late 14th century.
Expanded stem with hooked terminal.
L 194mm.
Hilton and Rahtz 1966, 120, fig 13.1.

**I266 PADLOCK KEY**
East Hill Farm, Houghton Regis,
Bedfordshire.
Site: *c*1000–1400.
Expanded stem, hooked terminal and bit broken. L 83mm.
Luton Museum, L/10/338/38.

**I267 PADLOCK KEY**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Expanded stem with hooked terminal.
L 143mm.
Salisbury and South Wiltshire Museum,
Salisbury, O.S.C126, 8/1932.

**I268 PADLOCK KEY**
Richard's Castle, Hereford and Worcester.
Site: founded *c*1050 and in disuse by 15th century.
Expanded stem with hooked terminal.
L 198mm.
Curnow and Thompson 1969, 122, fig 8C.

**I269 PADLOCK KEY**
Kettleby Thorpe, Lincolnshire.
14th to early 15th century.

Expanded stem with hooked terminal.
L 135mm.
Goodall 1974a, 30, fig 18.1.

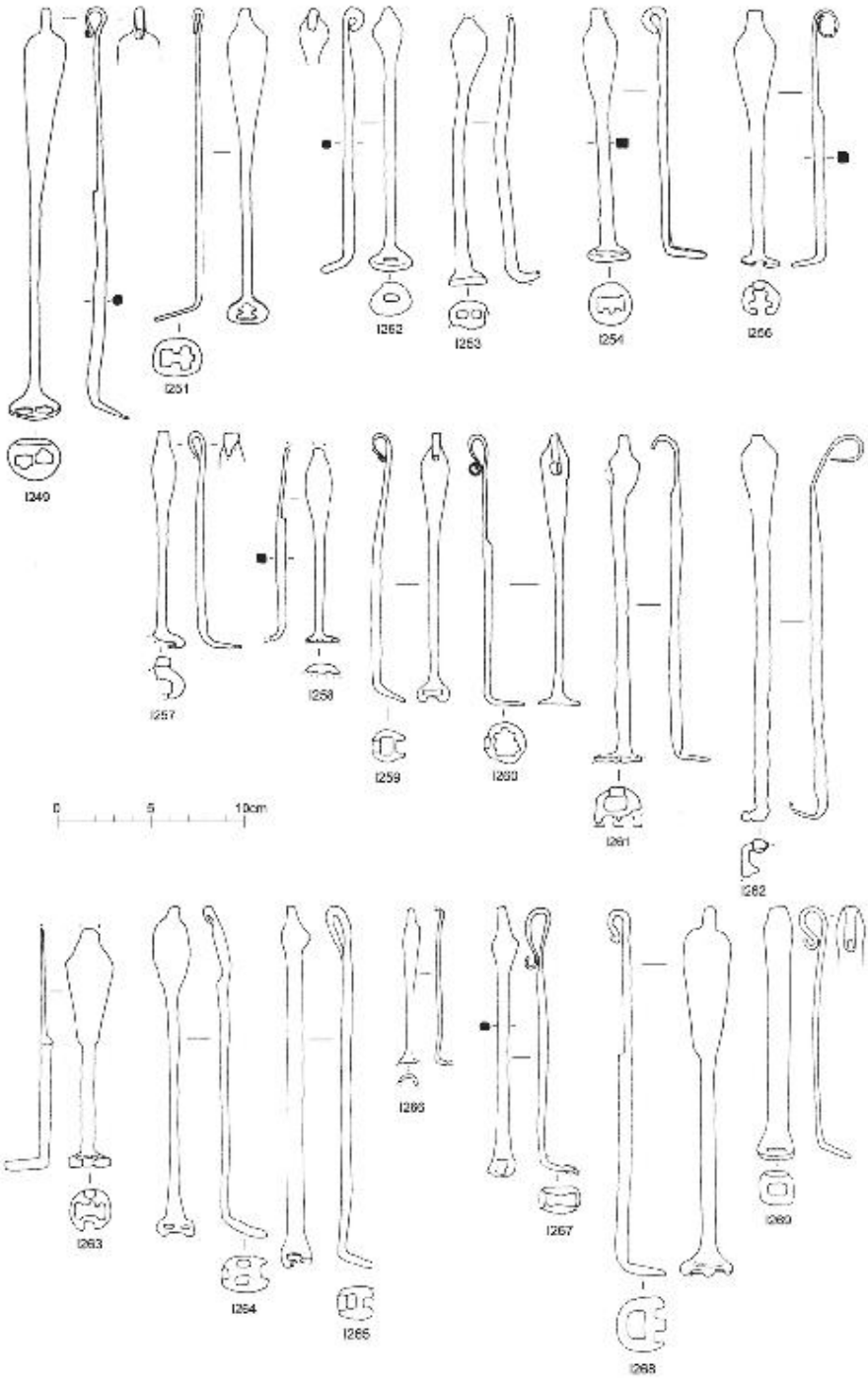


FIGURE 10.18
*Padlock keys*

**I270 PADLOCK KEY**
Dyserth Castle, Clwyd.
1241– 63.
Plain stem with hooked terminal. L 141mm.
Glenn 1915.

**I271 PADLOCK KEY**
Winchester, Hampshire.
Mid to late 13th century.
Plain stem, hooked terminal, broken bit.
L 144mm.
Goodall 1990-21, fig 323.3712.

**I272 PADLOCK KEY**
Wintringham, Cambridgeshire.
Site: *c*1175 –1340.
Plain stem with hooked terminal. Key distorted but drawn straight. L 157mm.
Goodall 1977a, 257, fig 43.17.

**I273 PADLOCK KEY**
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.
Plain stem with hooked terminal. L 102mm.
Reader 1913, 167, pl D .3; Helliwell and Macleod 1965.

**I274 PADLOCK KEY**
Goltho, Lincolnshire.
13th to mid 14th century.
Plain stem with hooked terminal. L 104mm.
Goodall 1975a, 83, fig 39.50.

**I275 PADLOCK KEY**
Gomeldon, Wiltshire.
Late 13th–14th century.
Plain stem with hooked terminal. L 182mm.
Musty and Algar 1986.

**I276 PADLOCK KEY**
Lyveden, northamptonshire.

*c*1350–1450.
Plain stem with hooked terminal. L 172mm.
Steane and Bryant 1975, 131, fig 49.154.

**I277 PADLOCK KEY**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
Plain stem with hooked terminal. L 127mm.
Goodall 1975a, 83, fig 39.49.

**I278 PADLOCK KEY**
London.
Late 15th to early 16th century.
Plain stem with hooked terminal. L 168mm.
Excavated by F C w illmot. Site at 66 Foyle Road.

**I279 PADLOCK KEY**
Somerby, Lincolnshire.
Site: 11th to mid 16th century.
Plain stem with hooked terminal. L 113mm.
Mynard 1969, 83, fig 12.Iw73.

**I280 PADLOCK KEY**
Somerby, Lincolnshire.
15th to mid 16th century.
Plain stem, hooked terminal, broken bit.
L 171mm.
Mynard 1969, 83, fig 12.Iw72.

**I281 PADLOCK KEY**
Gloucester.
11th to early 12th century.
Broken expanded stem and bit. L 95mm.
Excavated by H Hurst.

**I282 PADLOCK KEY**
Goltho Manor, Lincolnshire.
*c*1125 –50.
Expanded stem, hooked terminal lost. L 92mm.
Goodall 1987, fig 158.115.

**I283 PADLOCK KEY**

Llantrithyd, South Glamorgan.
Early to mid 12th century.
Expanded stem broken. L 112mm.
Goodall 1977f, 46, iron object fig 1.3.

**I284 PADLOCK KEY**
Brandon Castle, warwickshire.
13th century.
Expanded stem, hooked terminal and bit broken. L 134mm.
Herbert Museum and Art Gallery, Coventry.
For site see Chatwin 1955.

**I285/I90 PADLOCK KEY**
oxford.
13th–16th century.
key from barrel padlock with shackle **I90** complete with bolt. Broken plain stem, shape of wards of bit conjectured from form of bolt. L 101mm.
Excavated by T G Hassall. From Greyfriars burial ground.

**I286 PADLOCK KEY** (not illustrated)
walton, Aylesbury, Buckinghamshire.
11th century.
Bit broken. L 97mm.
Farley 1976, 241, fig 35.4.

**I287 PADLOCK KEY** (not illustrated)
Montgomery Castle, Powys.
Late 13th to early 14th century.
Bit as **I268**. L 117mm.
Excavated by J k k night.

**I288 PADLOCK KEY** (not illustrated)
Lyveden, northamptonshire.
Early 13th to first half 14th century.
Bit broken and similar to **I253**. L 100mm.
Steane 1967, 29, fig 10b.

**I289 PADLOCK KEY** (not illustrated)
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.
Bit broken. L 90mm.
Francis 1913; w ard Perkins 1967, 149, fig 45.6.

**I290 PADLOCK KEY** (not illustrated)
winchester, Hampshire.
Mid 18th–19th century.
Bit as **I269**. L 73mm.
Goodall 1990-21, 1022, no. 3722.

**I291 PADLOCK KEY** (not illustrated)
Lyveden, northamptonshire.
*c*1350–1450. Bit as **I276**. L 49mm.
Steane and Bryant 1975, 132, fig 49.157.

**I292 KEY** (not illustrated)
winchester, Hampshire.
Late 14th century.
Ring bow, solid stem with projecting tip, uncut bit. L 52mm.
Goodall 1990-21, 1033, no. 3846.

**I293 KEY** (not illustrated)
winchester, Hampshire.
14th century.
Lozenge-shaped bow, internally rounded. Solid stem with projecting tip, uncut bit. L 47mm.
Goodall 1990-21, 1033, no. 3847.

**I294 KEY**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century. In croft with late 14th, early 15th-century smithy.
Partly forged key with D-shaped bow and uncut bit. Stem tip broken. L 108mm.
Goodall 1975a, 84, fig 39.54.

**I295 KEY**
Waltham Abbey, Essex.
12th–13th and 16th century pottery in upper occupation debris of forge.
Partly forged key of rectangular-sectioned iron, the stem and bow drawn out but the latter not welded closed. Bit yet to be drawn down and cut. L 93mm.
Goodall 1973a, 170–171, fig 11.30.

**I296 KEY**
Winchester, Hampshire.

*c*1065–70.
Pear-shaped bow, moulded stem, broken bit.
Non-ferrous plating. L 108mm.
Goodall 1990-21, fig 325.3733.

**I297 KEY**
Winchester, Hampshire.
*c*1065–70.
Pear-shaped bow, moulded stem. Non-ferrous plating. L 113mm.
Goodall 1990-21, fig 325.3735.

**I298 KEY** (not illustrated)
Winchester, Hampshire.
*c*1065–70.
Pear-shaped bow, broken bit. L 113mm.
Goodall 1990-21, 1024, no. 3734.

**I299 KEY**
Winchester, Hampshire.
*c*1065/66 to?*c*1085.
Pear-shaped bow, broken bit. Non-ferrous plating. L 117mm.
Goodall 1990-21, fig 325.3736.

**I300 KEY**
winchester, Hampshire.
*c*1065/66 to?*c*1085.
Broken pear-shaped bow, moulded stem.
Non-ferrous plating. L 103mm.
Goodall 1990-21, fig 325.3737.

**I301 KEY**
Winchester, Hampshire.
11th to?mid 12th century.
Pear-shaped bow. Non-ferrous plating. L 118m m.
Goodall 1990-21, fig 325.3738.

**I302 KEY**
London.
12th century.
Broken, probably pear-shaped bow. L 50mm.
Marsden *et al* 1975, 206, fig 12.143.

**I303 KEY**
Northampton.
?12th to late 14th or early 15th century (?residual).
Pear-shaped bow. L 112mm.
Goodall 1979b, 71, fig 17.7.

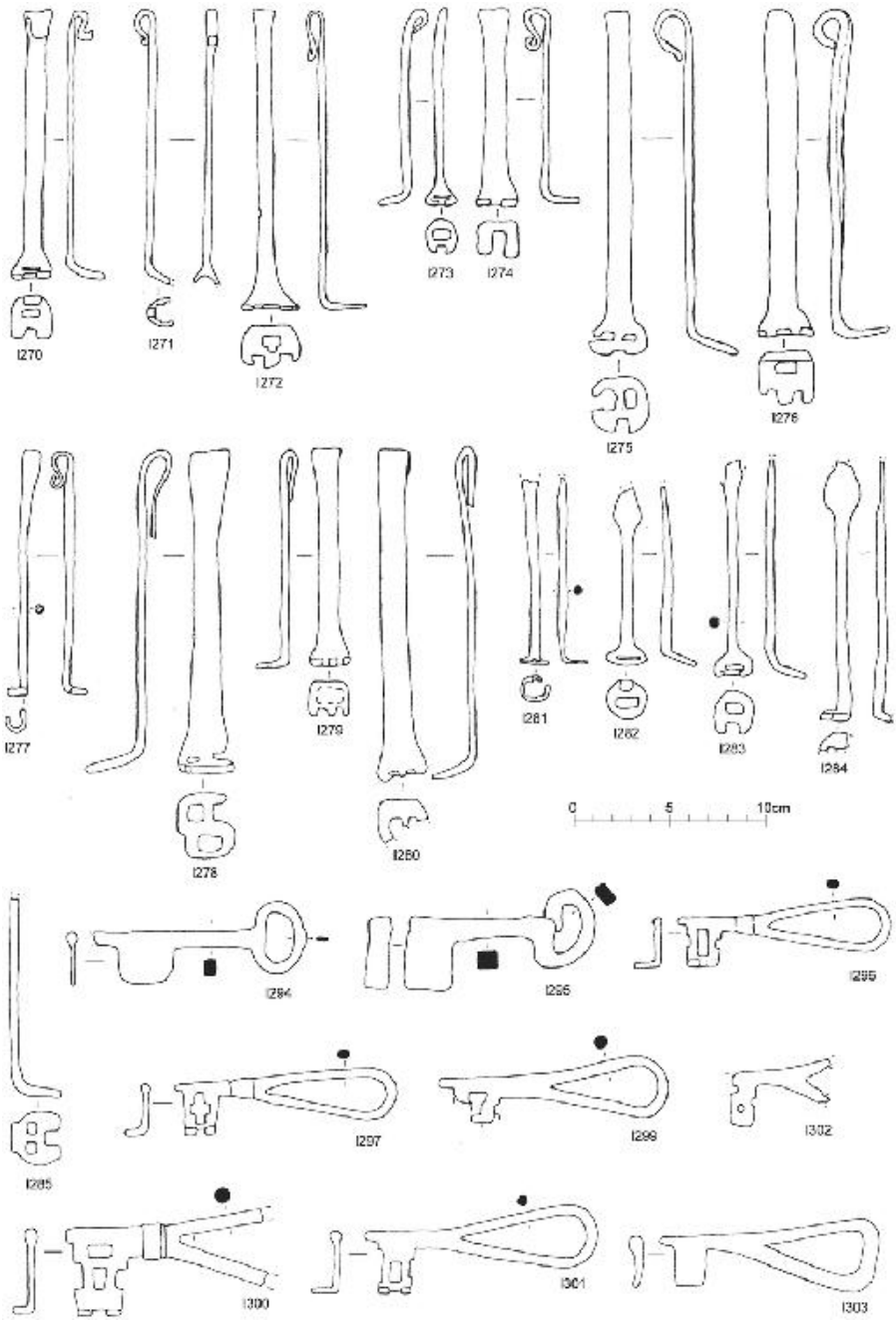



FIGURE 10.19
*Padlock keys and keys*

**I304 KEY**
Great Yarmouth, Norfolk.
Mid to late 11th century.

Ring bow. L 88mm.
Rogerson 1976, 166, fig 52.17.

**I305 KEY**
Gloucester.
11th, early 12th century.
Lozenge-shaped bow. L 69mm.
Excavated by H Hurst.

**I306 KEY**
South Cadbury, Somerset.
11th–12th century.
Ring bow, broken bit. L 116mm.
Alcock 1995.

**I307 KEY**
Winchester, Hampshire.
*c*1110.
Ring bow, decorative grooves on stem.
Non-ferrous plating. L 40mm.
Goodall 1990-21, fig 326.3753.

**I308 KEY**
Winchester, Hampshire.
Late 11th–early 12th century.
Ring bow. L 49mm.
Goodall 1990-21, fig 326.3755.

**I309 KEY**
Winchester, Hampshire.
Late 11th–12th century.
Ring bow. L 76mm.
Goodall 1990-21, fig 326.3756.

**I310 KEY**
York .
12th century.
D-shaped bow, grooved stem. Non-ferrous plating. L 74mm.
Addyman and Priestley 1977, 139, fig 10.13.

**I311 KEY**
Lydney Castle, Gloucestershire.

12th century, possibly into 13th century.
Ring bow. L 124mm.
Casey 1931, 252–253, pl XXXV.9.

**I312 KEY**
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Ring bow. L 183mm.
Casey 1931, 252–253, pl XXXV.8.

**I313 KEY**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Ring bow, grooved stem, broken bit.
Non-ferrous plating. L 133mm.
Goodall 2002, fig 7.2, no. 17.

**I314 KEY**
winchester, Hampshire.
13th century.
Ring bow set at right angles to bit. Grooved stem. non-ferrous plating. L 75mm.
Goodall 1990-21, fig 326.3764.

**I315 KEY**
Newbury, Berkshire.
*c*1200–30.
Ring bow. Non-ferrous plating. L 70mm.
Goodall 1997, fig 21, no. 29.

**I316 KEY**
Winchester, Hampshire.
Mid to?late 13th century.
Ring bow. Non-ferrous plating. L 69mm.
Goodall 1990-21, fig 326.3761.

**I317 KEY**
South Witham, Lincolnshire.
*c*1220 to late 13th century.
Ring bow, broken bit. L 105mm.
Goodall 2002, fig 7.2, no. 20.

**I318 KEY**
South Witham, Lincolnshire.
*c*1220 to late 13th century.
Broken ring bow. L 121mm.
Goodall 2002, fig 7.2, no. 18.

**I319 KEY**
South Witham, Lincolnshire.
*c*1220 to late 13th century.
Ring bow. L 132mm.
Goodall 2002, fig 7.2, no. 19.

**I320 KEY**
Wintringham, Cambridgeshire.
Late 13th century.
Ring bow, bit corroded. Non-ferrous plating.
L 54mm.
Goodall 1977a, 257, fig 43.22.

**I321 KEY**
Wintringham, Cambridgeshire.
Late 13th century.
Ring bow, stem and bit broken. Non-ferrous plating. L 71mm.
Goodall 1977a, 257, fig 43.23.

**I322 KEY**
Winchester, Hampshire.
Mid 13th century.
Ring bow. L 52mm.
Goodall 1990-21, fig 326.3759.

**I323 KEY**
Winchester, Hampshire.
13th century.
Ring bow, moulded stem, channelled bit.
Non-ferrous plating. L 58mm.
Goodall 1990-21, fig 326.3763.

**I324 KEY**
Winchester, Hampshire.
12th–?13th century.
Ring bow. Grooves on bow and moulded stem. Non-ferrous plating. L

79mm.
Goodall 1990-21, 1026, no. 3757.

**I325 KEY**
Brandon Castle, Warwickshire.
13th century.
Lozenge-shaped bow. L 112mm.
Chatwin 1955, 83, fig 12.3.

**I326 KEY**
Writtle, Essex.
13th century.
Ring bow. Non-ferrous plating L 121mm.
Rahtz 1969b, 85, fig 47.49.

**I327 KEY**
Winchester, Hampshire.
Early to mid 13th century.
Lozenge-shaped bow, moulded and grooved stem. Non-ferrous plating. L 127mm.
Goodall 1990-21, fig 326.3758.

**I328 KEY**
King's Lynn, Norfolk.
Late 13th and early 14th century.
Ring bow and stem broken. L 97mm.
Goodall and Carter 1977, 293, fig 133.9.

**I329 KEY**
Burton-in-Lonsdale, Nrth Yorkshire.
Later 13th to mid 14th century.
Ring bow. L 168mm.
Moorhouse 1971a, 93, fig 3.1.

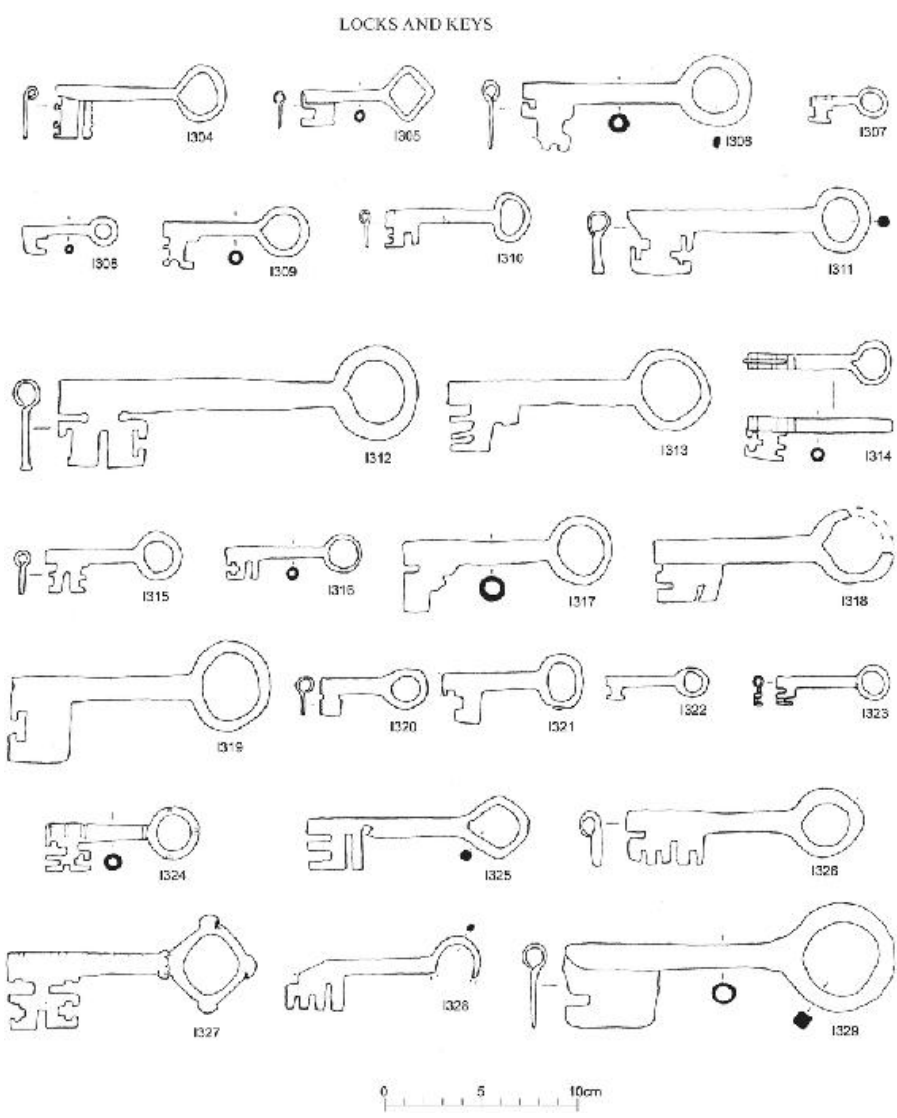



FIGURE 10.20
*Keys*

**I330 KEY**
Faringdon Clump, Oxfordshire.
Late 13th to 14th century pottery.
Ring bow. L 94mm.
Leeds 1936; 1937.

**I331 KEY**
Faringdon Clump, Oxfordshire.
Late 13th to 14th century pottery.

Ring bow. L 111mm.
Leeds 1937, 297, pl LXXXIIa.

**I332 KEY**
Hadleigh Castle, Essex.
13th–14th century.
Broken lozenge-shaped bow, grooved stem.
Non-ferrous plating. L 79mm.
Goodall 1975c, 138, fig 28.338.

**I333 KEY**
Winchester, Hampshire.
Mid 13th century.
Circular plate bow, grooved stem.
Non-ferrous plating. L 46mm.
Goodall 1990-21, fig 326.3760.

**I334 KEY**
Northampton.
Second half 14th century.
Ring bow. Incised grooves on bow and bit. non-ferrous plating. L 137mm.
Goodall 1978c, 152, fig 24.1.

**I335 KEY**
Portchester Castle, Hampshire.
Probably 14th century.
Ring bow. L 79mm.
Hinton 1977, 201, fig 107.48, scale 2:3, not 1:3.

**I336 KEY**
winchester, Hampshire.
15th century.
Ring bow, channelled bit. non-ferrous plating. L 54mm.
Goodall 1990-21, fig 326.3770.

**I337 KEY**
woodperry, oxfordshire.
12th to 14th century pottery.
oval bow. L 114mm
Ashmolean Museum, oxford, 1873.72. For site see wilson 1846.

**I338 KEY**

Thuxton, Norfolk.
Site: 12th–14th century.
Broken D-shaped bow. L 123mm.
Excavated by L A S Butler.

**I339 KEY**
King's Lynn, Norfolk.
*c*1350–1500.
Ring bow. L 118mm.
Goodall and Carter 1977, 293, fig 133.11.

**I340 KEY**
Wharram Percy, North Yorkshire.
Early 15th century.
Ring bow, broken bit. Non-ferrous plating.
L 95mm.
Goodall 1979a, 118, fig 60.4.

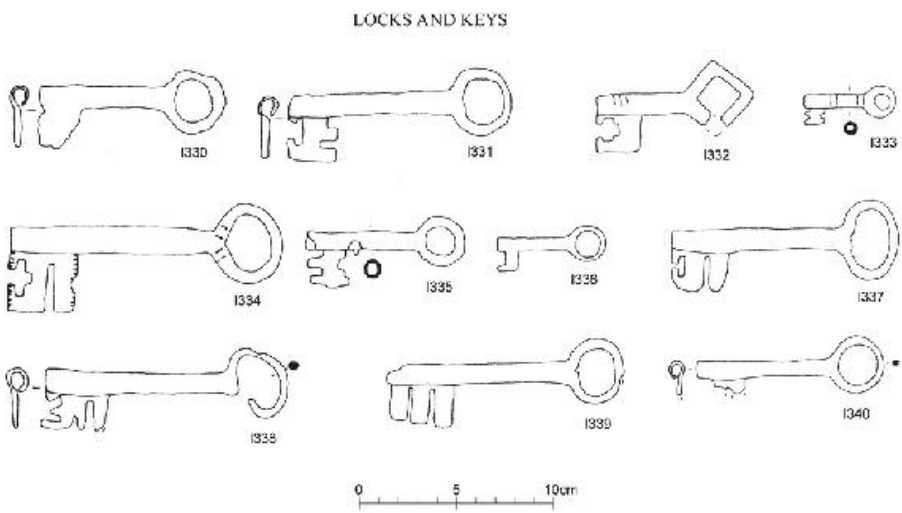



FIGURE 10.21
*Keys*

**I341 KEY**
King's Lynn, Norfolk.
15th century onwards.
Ring bow. L 103mm.
Goodall and Carter 1977, 293, fig 133.10.

**I342 KEY**

Hull, Humberside.
15th century.
D-shaped bow, grooved stem. Non-ferrous plating. L 113mm.
Goodall 1997b, 65, fig 27.74.

**I343 KEY**
Winchester, Hampshire.
Early to mid 14th century.
Ring bow, moulded and grooved stem, channelled bit. Non-ferrous plating. L
100mm.
Goodall 1990-21, fig 326.3767.

**I344 KEY**
Holworth, Dorset.
13th–15th century.
Lozenge-shaped bow, damaged bit. L
131m m.
Rahtz 1959, 146, fig 12.15.

**I345 KEY**
Huish, Wiltshire.
Site: 12th to 15th century.
Ring bow, channelled bit. L 61mm.
Shortt 1972, 116, fig 2.7.

**I346 KEY**
Grenstein, Norfolk.
Site: 12th to late 14th, 15th century.
Broken ring bow. L 100mm.
Goodall 1980c, fig 80, no. 63.

**I347 KEY**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Oval bow. L 102mm.
Goodall 1975a, 84, fig 39.53.

**I348 KEY**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Thistle-shaped bow additionally shaped internally and moulded

externally. Collar at junction of stem and bit, itself incomplete. L 51mm.
Goodall 1975a, 84, fig 39.56.

**I349 KEY**
Staines, Surrey.
Medieval, to 15th century.
Oval bow with collar at junction with stem.
X-radiography shows stem hollow for full length. L 47mm.
Barker 1976, 124, fig 26.29.

**I350 KEY**
Wharram Percy, North Yorkshire.
Mid 15th to early 16th century.
Broken ring bow, grooved stem. L 67mm.
Goodall 1979a, 121, fig 64.86.

**I351 KEY**
Haddlesey, North Yorkshire.
15th to 16th-century destruction level.
Broken oval bow, externally pointed.
Non-ferrous plating. L 97mm.
Goodall 1973b, 93, fig 37.12.

**I352 KEY**
Cambokeels, durham.
Later 14th to early 16th century.
Ring bow with collar at junction sheet iron bit. overall copper-alloy brazing. L 61mm.
Hildyard 1949, 199, fig 4.6.

**I353 KEY**
weoley Castle, Birmingham, west
Midlands.
*c*1270 –1600.
Ring bow, damaged bit. L 101mm.
Birmingham City Museum, wC312. For site see Oswald 1962.

**I354 KEY**
Weoley Castle, Birmingham, West
Midlands.
*c*1270 –1600.
Oval bow. L 86mm.

Taylor 1974. For site see Oswald 1962.

**I355 KEY**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Lozenge-shaped bow. Stem tip broken. L 120mm.
Birmingham City Museum, WC313. For site see Oswald 1962.

**I356 KEY** (not illustrated)
winchester, Hampshire.
Mid 10th–early 11th century.
Ring bow. L 107mm.
Goodall 1990-21, 1025, no. 3744.

**I357 KEY** (not illustrated)
winchester, Hampshire.
*c*1110.
Ring bow, grooved stem. Non-ferrous plating. L 40mm.
Goodall 1990-21, fig 326.3753.

**I358 KEY** (not illustrated)
Lyveden, Northamptonshire.
11th–12th century.
Ring bow, broken bit. L:101mm.
Steane and Bryant 1975, 132, fig 49.159.

**I359 KEY** (not illustrated)
Winchester, Hampshire.
11th–?12th century.
Broken lozenge-shaped bow, plain bit. L 84mm.
Goodall 1990-21, 1026, no. 3751.

**I360 KEY** (not illustrated)
Winchester, Hampshire.
*c*1110.
Ring bow. Non-ferrous plating. L 92mm.
Goodall 1990-21, 1026, no. 3752.

**I361 KEY** (not illustrated)
Winchester, Hampshire.
Late 13th–early 14th century.
Ring bow, broken bit. L 78mm.

Goodall 1990-21, 1026, no. 3765.

**I362 KEY** (not illustrated)
Winchester, Hampshire.
Late 13th–early 14th century.
Ring bow. Non-ferrous plating. L 34mm.
Goodall 1990-21, 1026, no. 3766.

**I363 KEY** (not illustrated)
Winchester, Hampshire.
Late 14th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 155mm.
Goodall 1990-21, 1026, no. 3768.

**I364 KEY** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Ring bow, moulded stem, broken bit.
Non-ferrous plating. L 81mm.
Goodall 1990-21, 1026, no. 3762.

**I365 KEY** (not illustrated)
Winchester, Hampshire.
14th century.
Ring bow. Non-ferrous plating. L 40mm.
Goodall 1990-21, 1026, no. 3769.

**I366 KEY**
Huish, Wiltshire.
Site: 12th to 15th century.
Ring bow, stem and bit all broken. L 130mm.
Shortt 1972, 116, no. 8.

**I367 KEY** (not illustrated)
Faxton, Northamptonshire.
Site: 12th to 15th century.
Bow broken. L 100mm.
Excavated by L A S Butler.

**I368 KEY**
Goltho Manor, Lincolnshire.

*c*110 0 –50.
Lozenge-shaped bow. L 87mm.
Goodall 1987, fig 158.116.

**I369 KEY**
Wintringham, Cambridgeshire.
Mid 13th century.
Ring bow, broken bit. L 116mm.
Goodall 1977a, 257, fig 43.19.

**I370 KEY**
Wintringham, Cambridgeshire.
Late 13th century.
Ring bow, moulded stem. L 122mm.
Goodall 1977a, 257, fig 43.24.

**I371 KEY**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Ring bow. L 123mm.
Butler 1974, 97, fig 9.24.

**I372 KEY**
Wintringham, Cambridgeshire.
Around early 14th century.
Broken ring bow and bit. Non-ferrous plating. L 83mm.
Goodall 1977a, 257, fig 43.26.

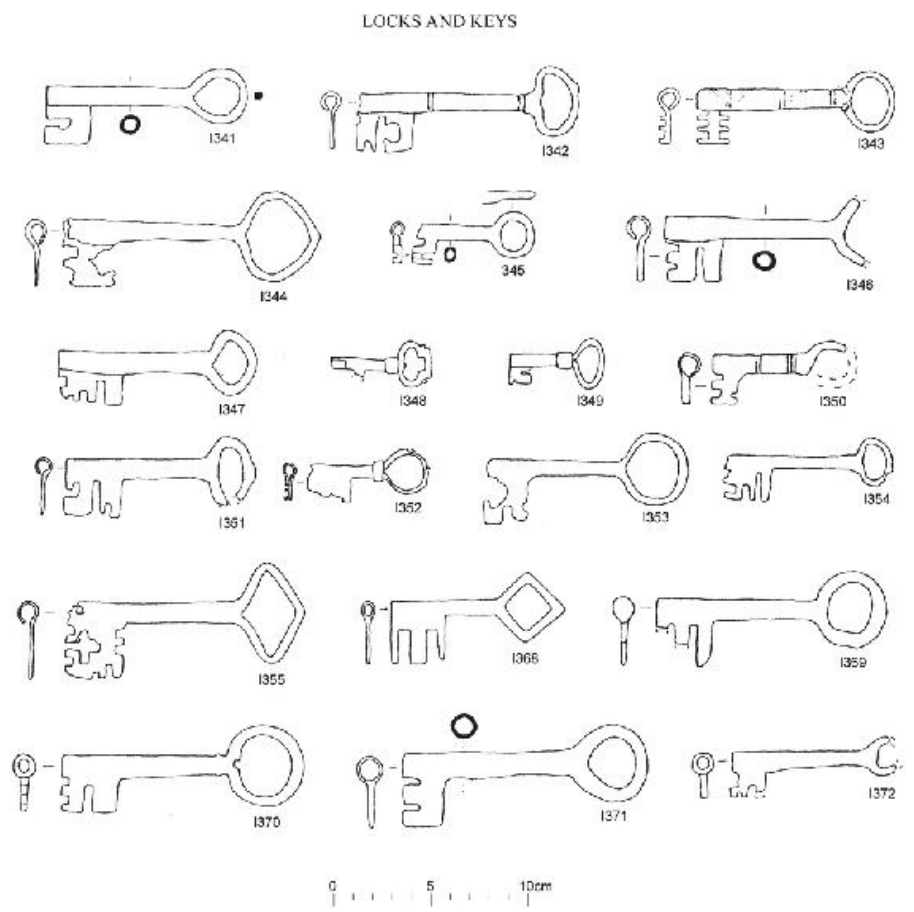



FIGURE 10.22
*Keys*

**I373 KEY** (not illustrated)
winchester, Hampshire.
15th century.
Ring bow, moulded stem with damaged tip.
L 46mm.
Goodall 1990-21, fig 327.3772.

**I374 KEY** (not illustrated)
Winchester, Hampshire.
Late 13th–?early 14th century.
Bow lost, bit incomplete. Grooved stem.
Non-ferrous plating. L 67mm.
Goodall 1990-21, 1026, no. 3771.

**I375 KEY**

Alsted, Surrey.
*c*1250–1405.
Ring bow, channelled bit. L 60mm.
Goodall 1976a, 56, fig 35.30.

**I376 KEY**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Broken ring bow and damaged stem tip.
L 116mm.
o'Neil 1944–45, 41, pl IX.5.

**I377 KEY**
Ospringe, Kent.
*c*1485–1550.
Oval bow, collar at head of stem. Brazing metal with major constituents tin and copper. L 94mm.
Goodall 1979c, 132, fig 21.72.

**I378 KEY**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Kidney-shaped bow, collar at head of stem.
Brazing metal with major constituents tin and copper. L 40mm.
Goodall 1979c, 132, fig 21.75.

**I379 KEY**
Cheddar, Somerset.
?Later 13th century to *c*1600.
Ring bow. Brazing metal riveted at junction of bit and stem. L 67mm.
Goodall 1979d, 264, fig 90.54.

**I380 KEY**
Castle Acre Castle, Norfolk.
1140s with derived material. Site founded soon after 1066.
Ring bow, moulded stem, damaged bit.
L 46mm.
Goodall 1982, fig 40, no. 104.

**I381 KEY** (not illustrated)
Winchester, Hampshire.
Early 12th century.

Ring bow, bit broken. L 58mm.
Goodall 1990-21, 1028, no. 3774.

**I382 KEY**
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Distorted lozenge-shaped bow retaining one corner boss. L 145mm.
Casey 1931, 252–254, pl XXXV.10.

**I383 KEY**
Red Castle, Thetford.
Late 11th to early 13th century.
O al bow, moulded stem, corroded bit.
L 52mm.
Knocker 1966–69, 148, fig 13.5.

**I384 KEY**
Winchester, Hampshire.
13th century.
Ring bow, moulded and grooved stem. Bit incomplete. L 76mm.
Goodall 1990-21, fig 327.3775.

**I385 KEY**
Chew Valley Lake, Avon.
13th century or later.
D-shaped bow. L 173mm.
Rahtz and Greenfield 1977, 326, fig 121.5.

**I386 KEY**
Kirkcudbright Castle, Dumfries and
Galloway.
1288–1308.
Oval bow, stem tip and bit broken.
L 100mm.
Dunning *et al* 1957–58, 138, fig 7.6.

**I387 KEY**
Hambleton Moat, Lincolnshire.
1250 –1400.
Oval bow. L 117.
Butler 1963, 67, fig 14.8.

**I388 KEY**
Seacourt, Oxfordshire.
Mid to late 12th to before mid to late 14th century.
Broken lozenge-shaped bow, internally rounded. Grooved stem, Non-ferrous plating.
L 83mm.
Biddle 1961–62, 181, fig 31.6, scale 1:4, not 1:3.

**I389 KEY**
Chew Valley Lake, Avon.
13th–14th century.
Oval bow. L 135mm.
Rahtz and Greenfield 1977, 326, fig 121.6.

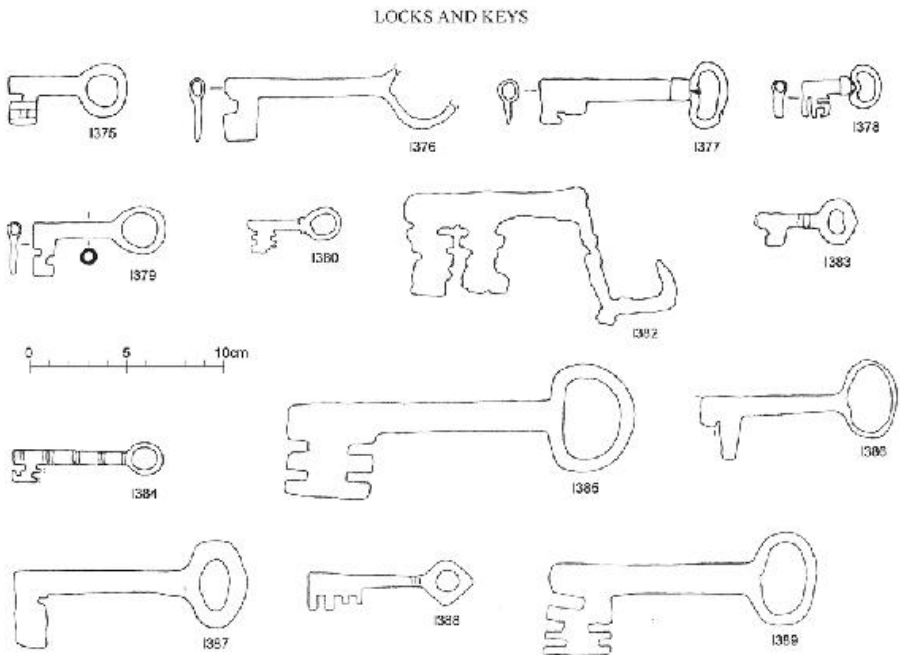



FIGURE 10.23
*Keys*

**I390 KEY**
Badby, Northamptonshire.
1198 to mid 14th century.
Ring bow. L 159mm.
Excavated by Mrs M Gray.

**I391 KEY**

Lyveden, Northamptonshire.
*c*1350–1450.
Oval bow, corroded bit. L 57mm.
Steane and Bryant 1975, 132, fig 49.158.

**I392 KEY** (not illustrated)
Winchester, Hampshire.
Late 10th–early 11th century.
Lozenge-shaped bow, internally rounded.
Singl top arm to stem and bit both broken.
L 75mm.
Goodall 1990-21, 1028, no. 3783.

**I393 KEY**
Winchester, Hampshire.
*c*1071–72.
Lozenge-shaped bow with corner bosses.
Bit incomplete. L 61mm.
Goodall 1990-21, fig 327.3782.

**I394 KEY**
Winchester, Hampshire.
12th–early 13th century.
Lozenge-shaped bow, moulded stem, incomplete bit. Non-ferrous plating.
L 70mm.
Goodall 1990-21, fig 327.3784.

**I395 KEY**
Southampton, Hampshire.
Late 13th century.
Broken ring bow, moulded and distorted stem. L 41mm.
Harvey 1975b, 279, fig 252.2022.

**I396 KEY** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Lozenge-shaped bow, internally rounded.
Single top arm to stem, bit lost. Non-ferrous plating. L 71mm.
Goodall 1990-21, 1028, no. 3785.

**I397 KEY**
Southampton, Hampshire.

1250–1300.
Oval bow. L 65mm.
Harvey 1975b, 279, fig 251.2014.

**I398 KEY**
Ellington, Cambridgeshire.
Second or third quarter 12th to late 13th century.
Oval bow, moulded and grooved stem.
Non-ferrous plating. L 43mm.
Goodall 1971, 68, fig 12.1.

**I399 KEY**
Lyveden, Northamptonshire.
Second half 13th century.
Oval bow. Copper-alloy plating noted.
L 39mm.
Bryant and Steane 1971, 57, fig 1412.

**I400 KEY**
King's Lynn, Norfolk.
*c*1250–1300.
Lozenge-shaped bow, moulded stem. L 42mm.
Goodall and Carter 1977, 293, fig 133.8.

**I401 KEY** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Ring bow, bit broken. L 46mm.
Goodall 1990-21, 1030, no. 3789.

**I402 KEY**
Wintringham, Cambridgeshire.
Second half 13th century.
Oval bow, stem tip lost. L 125mm.
Goodall 1977a, 257, fig 43.21.

**I403 KEY** (not illustrated)
Winchester, Hampshire.
14th–?15th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 36mm.
Goodall 1990-21, 1030, no. 3792.

**I404 KEY**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Thistle-shaped bow with internal shaping.
L 55mm.
Butler 1974, 97, fig 9.26.

**I405 KEY** (not illustrated)
Winchester, Hampshire.
Late 14th century.
Broken ring bow. Moulded and grooved stem. Non-ferrous plating. L 68mm.
Goodall 1990-21, 1030, no. 3791.

**I406 KEY**
Winchester, Hampshire.
Mid to late 13th century.
Ring bow, moulded stem. Non-ferrous plating. L 76mm.
Goodall 1990-21, 1030, no. 3788.

**I407 KEY**
Winchester, Hampshire.
Mid 13th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 77mm.
Goodall 1990-21, fig 327. 3787.

**I408 KEY** (not illustrated)
Winchester, Hampshire.
Possibly 13th century.
Ring bow, grooved stem. L 10mm.
Goodall 1990-21, 1030, no. 3804.

**I409 KEY** (not illustrated)
Winchester, Hampshire.
Late 14th–?15th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 101mm.
Goodall 1990-21, 1030, no. 3794.

**I410 KEY**
Winchester, Hampshire.

Late 13th–early 14th century.
Ring bow, moulded and grooved stem, incomplete bit. Non-ferrous plating.
L 103mm.
Goodall 1990-21, 327.3790.

**I411 KEY**
Gloucester.
13th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 104mm.
Hassall and Rhodes 1974, 76, fig 30.5.

**I412 KEY**
Chingley, k ent.
Second half 13th to mid 14th century.
Ring bow, broken bit. L 46mm.
Goodall 1975d, 60, fig 27.4

**I413 KEY**
London.
?Late 13h to mid 14th century.
Oval bow. L 57mm.
Henig 1974, 191, fig 39.74.

**I414 KEY**
Stonar, Kent.
*c*1275–1385.
D-shaped bow. L 46mm.
Excavated by N Macpherson-Grant.

**I415 KEY**
Stonar, Kent.
*c*1275–1385.
Thistle-shaped bow with external shaping.
Moulded stem. L 76mm.
Excavated by N Macpherson-Grant.

**I416 KEY**
Hadleigh Castle, Essex.
13th–14th century.
Ring bow, moulded stem. Non-ferrous plating. L 49mm.

Goodall 1975c, 138, fig 28.337.

**I417 KEY**
St Catharine's Hill, Winchester, Hampshire.
Second half 14th century.
Lozenge-shaped plate bow, internally rounded. Bit incomplete. L 57mm.
Hawkes *et al* 1930, 245–246, fig 29.I26.

**I418 KEY**
Wallingstones, Hereford and Worcester.
1300–25 to before 1400.
Thistle-shaped bow with internal and external shaping, moulded stem. L 85mm.
Bridgewater 1970–72, 102, no. 40.

**I419 KEY**
Winchester, Hampshire.
14th–?15th century.
Lozenge-shaped bow, moulded and grooved stem, broken bit. Non-ferrous plating.
L 109mm.
Goodall 1990-21, fig 327.3793.

**I420 KEY**
Woodperry, Oxfordshire.
12th to 14th centry pottery.
Lozenge-shaped bow, internally rounded.
Channelled bit. L 42mm.
Ashmolean Museum, Oxford, 1873.74. For site see wilson 1846.

**I421 KEY**
Woodperry, Oxfordshire.
12th to 14th century pottery.
D-shaped bow, corroded bit. L 70mm.
Ashmolean Museum, Oxford, 1873.73. For site see wilson 1846.

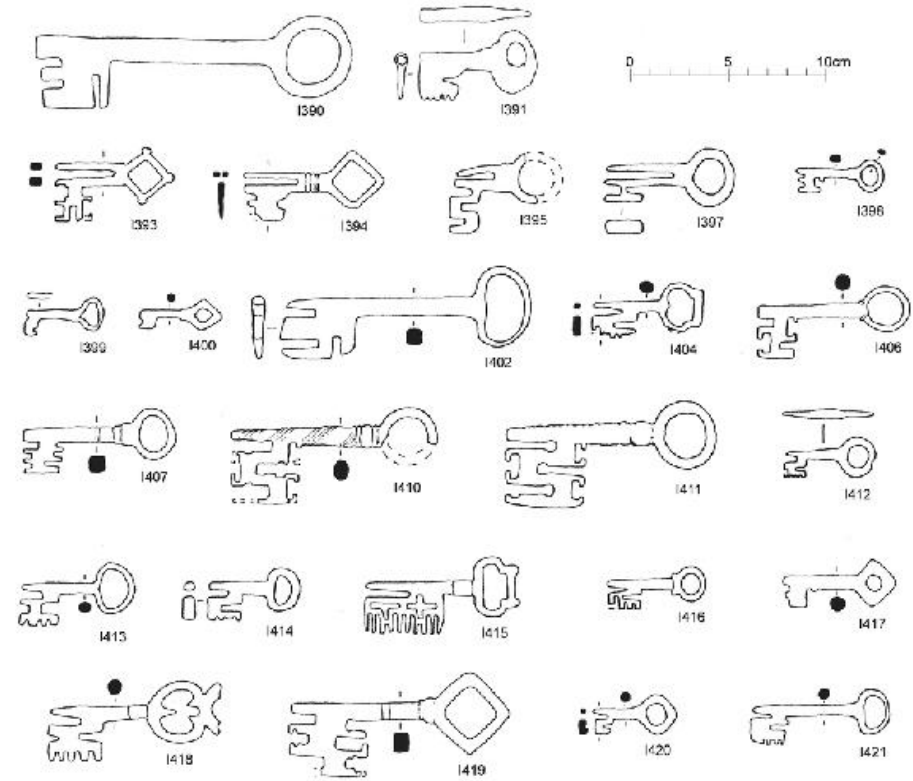



FIGURE 10.24
*Keys*

**I422 KEY**
Seacourt, oxfordshire.
Site: mid to late 12th to late 14th century.
D-shaped bow. L 104mm.
Biddle 1961–62, 182, fig 31.9, scale incorrect.

**I423 KEY**
Seacourt, Oxfordshire.
Site: mid to late 12th to late 14th century.
D-shaped bow. L 86mm.
Biddle 1961–62, 182, fig 31.8, scale incorrect.

**I424 KEY**
Seacourt, o xfordshire.
Site: mid to late 12th to late 14th century.
Oval bow, grooved bit. L 119mm.

Biddle 1961–62, 182, fig 31.10, scale incorrect.

**I425 KEY**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Ring bow, corroded bit. L 75mm.
O'Neil 1944–45, 41, pl IX.7.

**I426 KEY**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Flattened oval bow, bit corroded. L 99mm.
O'Neil 1944–45, 41, pl IX.6.

**I427 KEY**
Alsted, Surrey.
*c*1250–1405.
D-shaped bow. Moulded stem. Non-ferrous plating. L 92mm.
Goodall 1976a, 56, fig 35.29, incorrectly numbered 30 in text.

**I428 KEY**
Alsted, Surrey.
*c*1250–1405.
Lozenge-shaped bow, internally rounded.
Moulded and grooved stem. Non-ferrous plating. L 96mm.
Goodall 1976a, 56, fig 35.28, incorrectly numbered 29 in text.

**I429 KEY**
Writtle, Essex.
1306–*c*1425.
Broken oval bow and bit. L 84mm.
Rahtz 1969b, 87, fig 48.72.

**I430 KEY**
Princes Risborough, Buckinghamshire.
Late 14th, early 15th century or later.
Oval bow. Non-ferrous plating. L 53mm.
Pavry and Knocker 1953–60, 161, fig 13.2.

**I431 KEY**
Winchester, Hampshire.
Late14th–early 15th century.

Thistle-shaped bow, moulded stem,
incomplete channelled bit. L 40mm.
Goodall 1990-21, fig 327.3795.

**I432 KEY**
Winchester, Hampshire.
Early to mid 15th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 64mm.
Goodall 1990-21, fig 327.3796.

**I433 KEY**
Huish, Wiltshire.
14th–15th century.
Ring bow, moulded stem. L 95mm.
Shortt 1972, 116, fig 2.5.

**I434 KEY**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
Ring bow, pointed externally. Moulded stem, broken bit. L 55mm.
Goodall 1975a, 84, fig 39.55.

**I435 KEY**
Grenstein, Norfolk.
Site: 12th to late 14th, 15th century.
Plate bow, circular, pointed externally.
Moulded stem. L 49mm.
Goodall 1980c, fig 80, no. 64.

**I436 KEY**
Beckery Chapel, Glastonbury, Somerset.
Later 13th–?15th century.
Oval bow, corroded bit. L 41mm.
Rahtz and Hirst 1974, 61, fig 22.12.

**I437 KEY**
Kiln Combe, Bullock Down, East Sussex.
15th century.
Oval bow, channelled bit. L 50mm.
Excavated by P Drewett.

**I438 KEY**
Shaftesbury Abbey, Dorset.
?15th century.
Broken oval bow. L 50mm.
Harden 1954, 189, fig 2b.

**I439 KEY**
Winchester, Hampshire.
Mid 15th century.
Oval bow, moulded stem, grooved and
channelled bit. L 98mm.
Goodall 1990-21, fig 327.3797.

**I440 KEY**
Writtle, Essex.
*c*1425–1521, mixed with later material.
Broken oval bow, internally kidney-shaped.
Bit incomplete. L 79mm.
Rahtz 1969b, 85, fig 47.50.

**I441 KEY**
Newbury, Berkshire.
*c*1470 –1510.
D-shaped bow, internally kidney-shaped.
Non-ferrous plating. L 43mm.
Goodall 1997.

**I442 KEY**
Winchester, Hampshire.
15th–early 16th century.
Circular plate bow. Non-ferrous plating.
L 38mm.
Goodall 1990-21, fig 327.3798.

**I443 KEY**
Portchester Castle, Hampshire.
*c*1500 –21.
D-shaped bow. L 111mm.
Hinton 1977, 201, fig 107.51, scale 2:3, not 1:3.

**I444 KEY**
Hull, Humberside.

Early to mid 16th century.
D-shaped bow, externally pointed. L 64mm.
Goodall 1997b, 65, fig 27.85.

**I445 KEY**
Hull, Humberside.
Mid 16th century.
Thistle-shaped bow, moulded stem.
L 73mm.
Goodall 1997b, 65, fig 27.83.

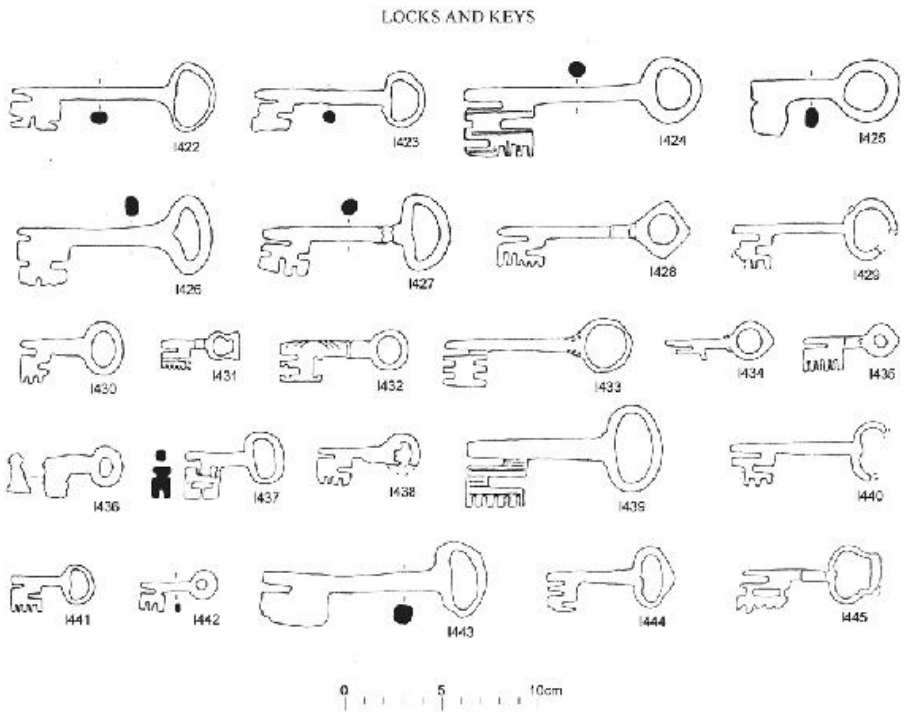



FIGURE 10.25
*Keys*

**I446 KEY**
Weoley Castle, Birmingham, West Midlands.
*c*1080 –1600.
D-shaped bow. L 100mm.
Birmingham City Museum, w C315. For site see Oswald 1962.

**I447 KEY**
Weoley Castle, Birmingham, West Midlands.
*c*1080 –1600.

Broken D-shaped bow, damaged stem and bit. L 119mm.
Birmingham City Museum, WC36. For site see Oswald 1962.

**I448 KEY**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
D-shaped bow, pointed externally.
Non-ferrous plating. L 132mm.
Goodall 1980a, 509, fig 265.4.

**I449 KEY**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
Oval bow. Non-ferrous plating. L 125mm.
Goodall 1980a, 509, fig 265.3.

**I450 KEY**
Princes Risborough, Buckinghamshire.
Late 13th to 16th century.
Broken D-shaped bow and bit. L 94mm.
Pavry and k nocker 1953–60, 161, fig 13.4.

**I451 KEY**
Cheddar, Somerset.
Later 13th century to *c*1600.
Thistle-shaped bow, moulded stem.
L 103mm.
Goodall 1979d, 264, fig 90.62.

**I452 KEY**
Winchester, Hampshire.
Late 10th to late 11th century.
Ring bow. Non-ferrous plating. L 59mm.
Goodall 1990-21, fig 328.3807.

**I453 KEY**
Winchester, Hampshire.
*c*1065–66 to *c*1110.
Lozenge-shaped bow with corner bosses, internally rounded. Grooved decoration on stem and bit. Non-ferrous plating. L 82mm.
Goodall 1990-21, fig 328.3809.

**I454 KEY**
Portchester Castle, Hampshire.
11th–12th century.
Ring bow. L 91mm.
Hinton 1977, 201, fig 107.50, scale 2:3, not 1:3.

**I455 KEY**
Winchester, Hampshire.
*c*1110.
Lozenge-shaped bow, internally rounded.
Non-ferrous plating. L 96mm.
Goodall 1990-21, fig 328.3810.

**I456 KEY**
Southampton, Hampshire.
1125 –50.
Broken ring bow and stem. L 58mm.
Harvey 1975b, 276, fig 250.1966.

**I457 KEY**
Llantrithyd, South Glarmorgan.
Early to mid 12th century.
Broken lozenge bow, grooved stem.
Non-ferrous plating. L 35mm.
Goodall 1977f, 46, iron object fig 1.8.

**I458 KEY**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Ring bow, bit broken. L 94mm.
Goodall 1977f, 46, iron object fig 1.6.

**I459 KEY**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Lozenge bow, grooved stem, broken bit.
Non-ferrous plating. L 96mm.
Goodall 1977f, 46, iron object fig 1.7.

**I460 KEY**
Winchester, Hampshire.
Late 12th–early 13th century.

Ring bow. L 64mm.
Goodall 1990-21, fig 328.3813.

**I461 KEY**
Aldingbourne, West Sussex.
12th century.
Lozenge bow. L 154mm.
Brewster and Brewster 1969, 166–169, fig 16.

**I462 KEY**
Wallingstones, Hereford and Worcester.
Early 13th century.
Broken oval bow. L 138mm.
Bridgewater 1970–72, 100, no. 2.

**I463 KEY**
Brandon Castle, Warwickshire.
1226–66.
Broken ring bow. L 47mm.
Chatwin 1955, 83, fig 12.2.

**I464 KEY**
Newbury, Berkshire.
*c*1230–60.
Lozenge-shaped bow with corner bosses, moulded stem. L 83mm.
Goodall 1997, fig 21, no. 32.

**I465 key**
Winchester, Hampshire.
Late 13th–early 14th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 91mm.
Goodall 1990-21, fig 328.3820.

**I466 KEY**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Broken ring bow and bit. L 124mm.
Butler 1974, 97, fig 9.25.

**I467 key**
Oxford.

13th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 67mm.
Excavated by T G Hassall. From Greyfriars.

**I468 KEY**
Winchester, Hampshire.
Early 13th century.
Ring bow. L 83mm.
Goodall 1990-21, fig 328.3814.

**I469 KEY**
winchester, Hampshire.
Mid 13th century.
Broken lozenge-shaped bow with corner bosses. Stem tip broken. Bow and stem moulded and grooved. non-ferrous plating.
L 75mm.
Goodall 1990-21, fig 328.3817.

**I470 KEY**
Hangleton, west Sussex.
Late 13th or early 14th century.
oval bow and bit broken. L 135mm.
Holden 1963, 169, fig 36.11.

**I471 KEY**
Stonar, kent.
*c*1275–1385.
Ring bow, broken bit. L 78mm.
Excavated by n Macpherson-Grant.

**I472 KEY**
Upton, Gloucestershire.
Late 13th to late 14th century.
Ring bow. L 138mm.
Hilton and Rahtz 1966, 120, fig 13.3.

**I473 KEY**
Eynsford Castle, k ent.
*c*130 0 –1312.
D-shaped bow. L 189mm.
Rigold 1971, 144, fig 10.12.

**I474 KEY**
Glottenham, East Sussex.
Early 14th century.
Broken ring bow. L 118mm.
Excavated by D Martin.

**I475 KEY**
Winchester, Hampshire.
16th–18th century.
Incomplete lozenge-shaped bow with corner bosses, moulded and grooved stem.
Non-ferrous plating. L 81mm.
Goodall 1990-21, fig 328.3825.

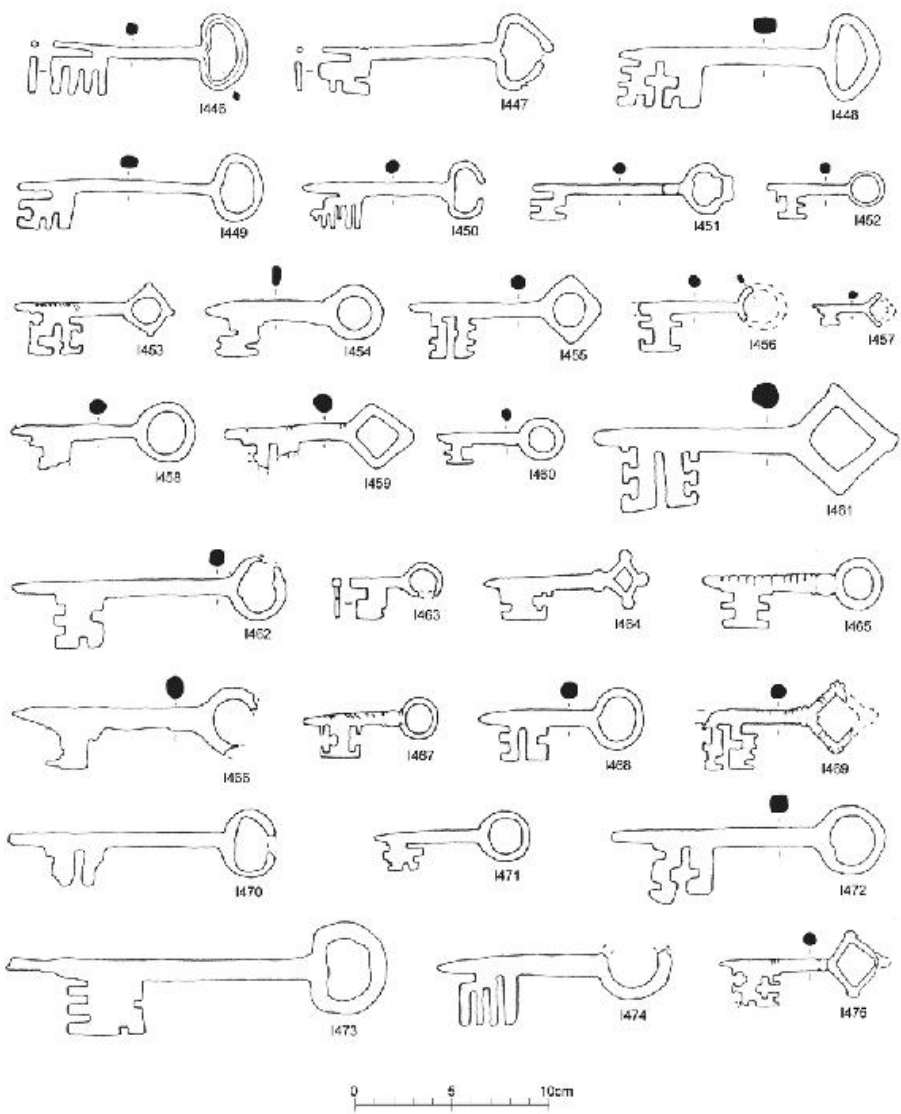



FIGURE 10.26
*Keys*

**I476 KEY**
Bramber Castle, West Sussex.
?14th century.
Ring bow. L 96mm.
Barton and Holden 1977, 66, fig 20.8.

**I477 KEY**

Bramber Castle, West Sussex.
?14th century.
Ring bow, incomplete bit. L 130mm.
Barton and Holden 1977, 66, fig 20.9.

**I478 KEY**
Brooklands, w eybridge, Surrey.
*c*1150–1325.
Ring bow, moulded stem, broken bit.
Copper-alloy deposit on stem perhaps the remains of plating. L 129mm.
Goodall 1977d, 73, fig 45.23.

**I479 KEY**
Seacourt, Oxfordshire.
Site: mid to late 12th to late 14th century.
Ring bow, corroded bit. L 53mm.
Biddle 1961–62, 181, fig 31.7, scale incorrect.

**I480 KEY**
Woodperry, Oxfordshire.
12th to 14th century pottery.
Ring bow. L 145mm.
Ashmolean Museum, Oxford, 1873.68. For site see Wilson 1846.

**I481 KEY**
Kettleby Thorpe, Lincolnshire.
14th to early 15th century.
Lozenge-shaped bow. L 49mm.
Goodall 1974a, 33, fig 18.5.

**I482 KEY**
Winchester, Hampshire.
Early to?mid 15th century.
Ring bow, moulded and grooved stem.
Non-ferrous plating. L 103mm.
Goodall 1990-21, fig 328.3823.

**I483 KEY**
Beckery Chapel, Glastonbury, Somerset.
Later 13th–?15th century.
Ring bow, corroded bit. L 42mm.
Rahtz and Hirst 1974, 61, fig 22.13.

**I484 KEY**
York .
13th–15th century.
Broken ring bow. Moulded stem, tip broken.
L 135mm.
Richardson 1959, 100, fig 28.2.

**I485 KEY**
Writtle, Essex.
*c*1425–1521 mixed with later levels.
Broken ring bow and bit. L 172mm.
Rahtz 1969b, 85, fig 47.53.

**I486 KEY**
Winchester, Hampshire.
16th century.
Ring bow, moulded and grooved stem, broken bit. Non-ferrous plating. L 122mm.
Goodall 1990-21, fig 328.3824.

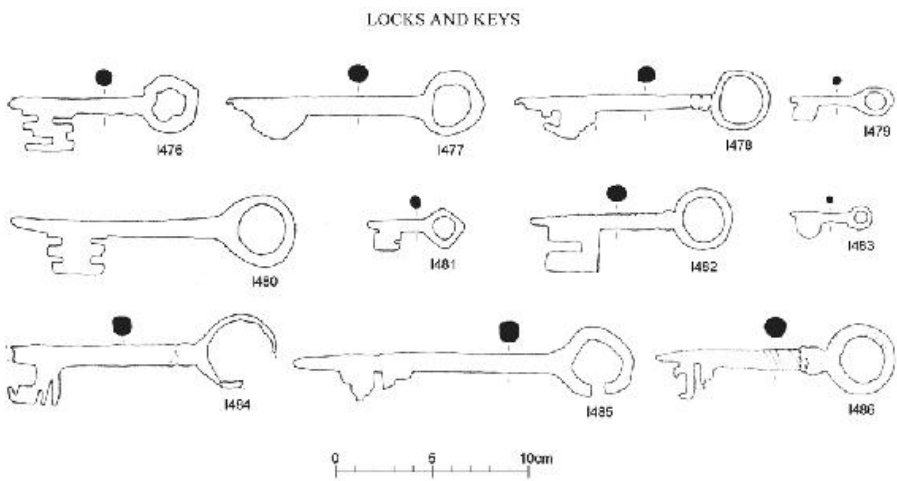



FIGURE 10.27
*Keys*

**I487 KEY** (not illustrated)
Winchester, Hampshire.
Late 11th–12th century.
Lozenge-shaped bow. Non-ferrous plating.
L 72mm.
Goodall 1990-21, 1032, no. 3812.

**I488 KEY** (not illustrated)
Winchester, Hampshire.
Early 12th century.
Lozenge-shaped bow with moulded corner bosses. Bit broken. L 115mm.
Goodall 1990-21, 1032, no. 3811.

**I489 KEY** (not illustrated)
Winchester, Hampshire.
Late 12th–mid 13th century.
Broken ring bow. Grooved stem. Non-ferrous plating. L 85mm.
Goodall 1990-21, 1032, no. 3815.

**I490 KEY** (not illustrated)
Winchester, Hampshire.
?Mid 13th century.
Ring bow. Channelled bit. L 29mm.
Goodall 1990-21, 1032, no. 3816.

**I491 KEY** (not illustrated)
Winchester, Hampshire.
13th century.
Lozenge-shaped bow, internally rounded.
L 67mm.
Goodall 1990-21, 1032, no. 3819.

**I492 KEY** (not illustrated)
Winchester, Hampshire.
14–?15th th century.
Lozenge-shaped bow, internally rounded.
Moulded stem. L 70mm.
Goodall 1990-21, 1032, no. 3822.

**I493 KEY** (not illustrated)
Winchester, Hampshire.
Late 14th century.
Ring bow, moulded stem and bit broken.
Grooved bow and stem. Non-ferrous plating.
L 101mm.
Goodall 1990-21, 1032, no. 3821.

**I494 KEY**
Durham.

Later 11th to mid 12th century.
Lozenge-shaped plate bow with circular hole. L 74mm.
Carver 1979, 18, fig 13.79/1581.

**I495 KEY**
Ascot Doilly, Oxfordshire.
12th century.
Ring bow, broken bit. Silver inlaid grooves.
L 92mm.
Jope and Threlfall 1959, 265, fig 20.1.

**I496 KEY**
Wintringham, Cambridgeshire.
Around mid 13th century.
Broken ring bow and bit. Non-ferrous plating. L 122mm.
Goodall 1977a, 257, fig 43.20.

**I497 KEY**
Winchester, Hampshire.
13th–14th century.
Ring bow, moulded stem. Non-ferrous plating. L 137mm.
Goodall 1990-21, fig 329.3830.

**I498 KEY**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Ring bow. L 165mm.
Goodall 2002, fig 7.2, no. 21.

**I499 KEY**
Netherton, Hampshire.
Late 13th–14th century.
Ring bow. L 49mm.
Goodall 1990-28, fig 9.7 no. 397.

**I500 KEY**
Woodperry, Oxfordshire.
12th to 14th century pottery.
Ring bow, broken bit. L 145mm.
Ashmolean Museum, Oxford, 1873.67. For site see Wilson 1846.

**I501 KEY**

Durrington, West Sussex.
12th–14th century.
Oval bow. Precise shape of bit uncertain.
L 188mm.
Barton 1964, 32, fig 1.7.

**I502 KEY**
Alvechurch, Hereford and w orcester.
*c*1350 –1400.
D-shaped bow, damaged stem, broken bit.
L 135mm.
Oswald 1954, 8, pl 5.5.

**I503 KEY**
Southampton, Hampshire.
1350 –1400.
D-shaped bow, internally kidney-shaped.
L 135mm.
Harvey 1975b, 287, fig 256.2085.

**I504 KEY**
N ortholt Manor, Greater London.
1350–70.
Broken D-shaped bow and bit. Non-ferrous plating. L 161mm.
Excavated by J G Hurst.

**I505 KEY**
Bodiam Castle, East Sussex.
1390 bridge construction.
Oval bow, corroded bit, broken stem tip.
L 164mm.
Excavated by D Martin.

**I506 KEY**
W rittle, Essex.
1306–*c*1425.
Broken?ring bow. L 121mm.
Rahtz 1969b, 87, fig 48.73.

**I507 KEY**
Baginton Castle, Warwickshire.
Site: probably 14th–15th century.

D -shaped bow, externally pointed.
L 139mm.
Herbert Art Gallery and Museum, Coventry.

**I508 KEY**
Hereford.
Early 15th century.
Oval bow, broken bit. L 128mm.
Shoesmith 1970–72, 233, fig 5.4.

**I509 KEY**
Lyveden, N orthamptonshire.
1475–1500.
D -shaped bow. L 128mm.
Steane and Bryant 1975, 132, fig 49.156.

**I510 KEY**
Northampton.
Later 15th century.
D-shaped bow, externally pointed.
Non-ferrous plating. L 136mm.
Goodall *et al* 1979, 268, fig 116.13.

**I511 KEY**
Hull, Humberside.
15th century.
D-shaped bow, broken bit. Non-ferrous plating. L 120mm.
Goodall 1997b, 65, fig 27.73.

**I512 KEY**
Hawkesley Moat, West Midlands.
15th century.
D-shaped bow, broken bit. L 137mm.
Oswald 1958, 47. Birmingham City Museum.

**I513 KEY**
York .
13th–15th century.
Ring bow, moulded and grooved stem, broken bit. L 157mm.
Richardson 1959, 100, fig 28.1.

**I514 KEY**

Huish, Wiltshire.
Site: 12th to 15th century.
Oval bow, grooved stem. L 179mm.
Shortt 1972, 116, fig 2.4.

**I515 KEY**
Writtle, Essex.
*c*1425–1521 mixed with later levels.
Oval bow. Non-ferrous plating. L 142mm.
Rahtz 1969b, 85, fig 47.52.

**I516 KEY**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Rounded plate bow with circular hole.
L 93mm.
Goodall 1979a, 118, fig 60.5.

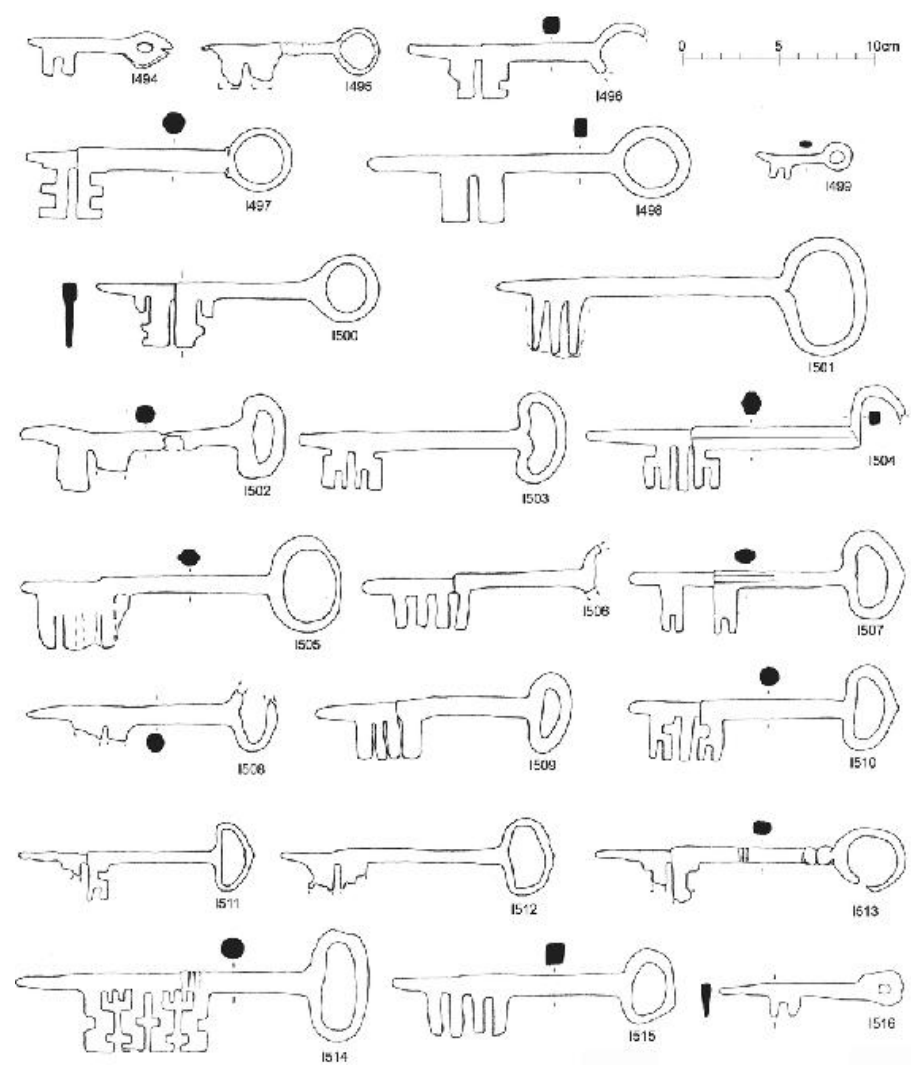



FIGURE 10.28
*Keys*

**I517 KEY**
Waltham Abbey, Essex.
From silt of well dug in late 13th, early 14th century and filled in late 15th, early 16th century.
D-shaped bow, incomplete bit, knobbed stem tip. L 140mm.
Goodall 1973a, 171, fig 11.31.

**I518 KEY**
London.

Late 15th to early 16th century.
D-shaped bow, damaged bit. L 154mm.
Excavated by F C w illmot. Site at 66
Foyle Road.

**I519 KEY**
St Neots Priory, Cambridgeshire.
Probably 15th, early 16th century.
D-shaped bow, corroded bit. L 116mm.
Tebbutt 1966, 51, fig 4a, scale 1:2, not 1:4.

**I520 KEY**
Thelsford Priory, Warwickshire.
*c*1400 –1536.
D-shaped bow, grooved stem. L 140mm.
Excavated by Mrs M Gray.

**I521 KEY**
Ospringe, Kent.
*c*1483–1550.
Oval bow, damaged bit. L 148mm.
Goodall 1979c, 132, fig 21.71.

**I522 KEY**
Rest Park, North Yorkshire.
15th to 16th-century destruction levels.
Damaged D-shaped bow, externally pointed.
L 166mm.
Goodall 1973b, 93, fig 37.13.

**I523 KEY**
Hadleigh Castle, Essex.
Probably late in occupation from 1230 to mid 16th century.
Oval bow, corroded bit. L 173mm.
King 1869, 77; d rewett 1975, 96–97.

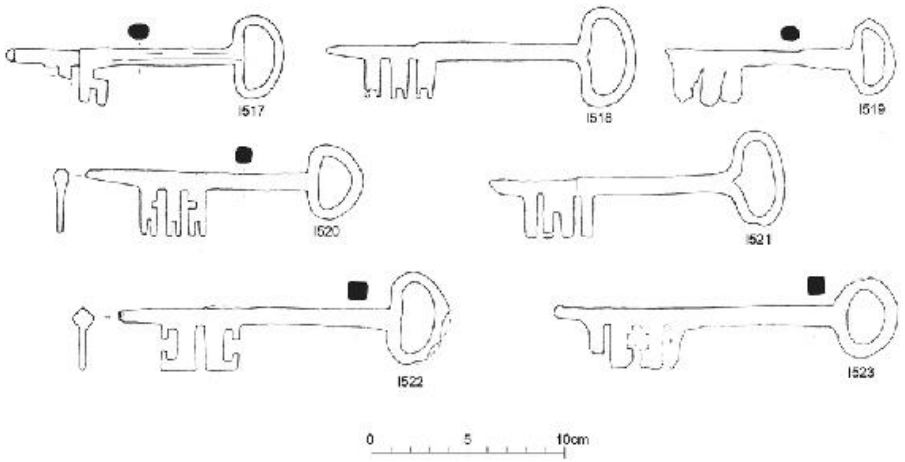



FIGURE 10.29
*Keys*

**I524 KEY**
Portchester Castle, Hampshire.
*c*1500 –21.
Distorted bow, broken bit. L 130mm.
Hinton 1977, 204, fig 109.63.

**I525 KEY**
Waltham Abbey, Essex.
Probably early 16th century.
D-shaped bow, broken bit. L 155mm.
Goodall 1978d, 157, fig 21.1.

**I526 KEY**
Thelsford Priory, Warwickshire.
Destruction layers of *c*1536.
Oval bow. L 136mm.
Excavated by Mrs M Gray.

**I527 KEY**
West Hartburn, Durham.
Probably last occupation of 13th- to 16th-century house.
D-shaped bow, stem tip broken. L 140mm.
Still and Pallister 1964, 197, 200, fig 5.56.

**I528 KEY**

Abingdon, Oxfordshire.
16th century.
D-shaped bow, internally kidney-shaped.
L 162mm.
Parrington 1976, 77, fig 55.2.

**I529 KEY**
Winchester, Hampshire.
?Early 14th century.
Broken bow. Non-ferrous plating. L 86mm.
Goodall 1990-21, fig 329.3829.

**I530 KEY**
Cambokeels, Durham.
Later 14th to early 16th century.
Oval bit, damaged bit. L 126mm.
Hildyard 1949, 199, fig 4.5.

**I531 KEY**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
D-shaped bow, incomplete bit. L 142mm.
Taylor 1974. For site see Oswald 1962.

**I532 KEY**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Oval bow, grooved stem. Traces of white metal plating. L 156mm.
Birmingham City Museum, w C319. For site see Oswald 1962.

**I533 KEY**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
D-shaped bow. L 131mm.
Goodall 1980a, 509, fig 265.6.

**I534 KEY**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
D-shaped bow, broken bit. L 121mm.
Goodall 1980a, 509, fig 265.5.

**I535 KEY**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
D-shaped bow. L 189mm.
Goodall 1980a, 509, fig 265.7.

**I536 KEY**
Winchester, Hampshire.
12th century.
Ring bow, moulded stem, grooves on bit.
Non-ferrous plating. L 155m.
Goodall 1990-21, fig 329.3826.

**I537 KEY**
Churchill, Oxfordshire.
Late 12th–13th century.
D-shaped bow, corroded bit. L 155mm.
Hinton 1968, 66, fig 18.3.

**I538 KEY**
Wintringham, Cambridgeshire.
Late 13th century.
D-shaped bow, moulded stem with tip missing. Non-ferrous plating. L 105mm.
Goodall 1977a, 257, fig 43.25.

**I539 KEY**
Winchester, Hampshire.
?15th century.
D-shaped bow. Bit broken. L 166mm.
Goodall 1990-21, fig 329.3831.

**I540 KEY**
Beckery Chapel, Glastonbury, Somerset.
Saxon and/or early medieval to later 13th cent ur y.
Oval bow. L 173mm.
Rahtz and Hirst 1974, 61, fig 22.9.

**I541 KEY**
Upton, Gloucestershire.
Late 13th to late 14th century.
D-shaped bow. Non-ferrous plating.

L 131mm.
Hilton and Rahtz 1966, 120, fig 13.4.

**I542 KEY**
Ayton Castle, North Yorkshire.
13th–14th century.
D-shaped bow. L 106mm.
Rimington and Rutter 1967, 60, fig 13.37/26.

**I543 KEY**
Eynsford Castle, Kent.
*c*130 0 –1312.
Broken oval bow. L 131mm.
Rigold 1971, 144, fig 10.11.

**I544 KEY**
Seacourt, Oxfordshire.
Early 14th century.
Oval bow. L 132mm.
Biddle 1961–62, 182, fig 31.11, scale 1:4, not 1:3.

**I545 KEY**
Southampton, Hampshire.
1350 –1400.
D-shaped bow. Non-ferrous plating.
L 117mm.
Harvey 1975b, 287, fig 256.2086.

**I546 KEY**
Seacourt, Oxfordshire.
Site: mid to late 12th to late 14th century.
D-shaped bow. L 130mm.
Biddle 1961–62, 182, fig 31.12, scale 1:4, not 1:3.

**I547 KEY**
Alsted, Surrey.
*c*1250–1405, and probably *c*l395–1405.
Broken ring bow. L 136mm.
Goodall 1976a, 56, fig 35.27, incorrectly numbered 28 in text.

**I548 KEY**
Baginton Castle, warwickshire.

Site: probably 14th–15th century.
D-shaped bow. L 129mm.
Herbert Art Gallery and Museum, Coventry.

**I549 KEY**
Winchester, Hampshire.
Late 15th–early 16th century.
Kidney-shaped bow. Non-ferrous plating.
L 126mm.
Goodall 1990-21, fig 329.3832.

**I550 KEY**
Baginton Castle, Warwickshire.
Site: probably 14th–15th century.
D-shaped bow, externally pointed.
L 151mm.
Herbert Art Gallery and Museum, Coventry.

**I551 KEY**
Huish, Wiltshire.
Site: 12th–15th century.
D-shaped bow. L 152mm.
Shortt 1972, 116, fig 2.6.

**I552 KEY**
Beckery Chapel, Glastonbury, Somerset.
Saxon and/or early medieval to?15th century.
Oval bow, broken bit. L 132mm.
Rahtz and Hirst 1974, 61, fig 22.10.

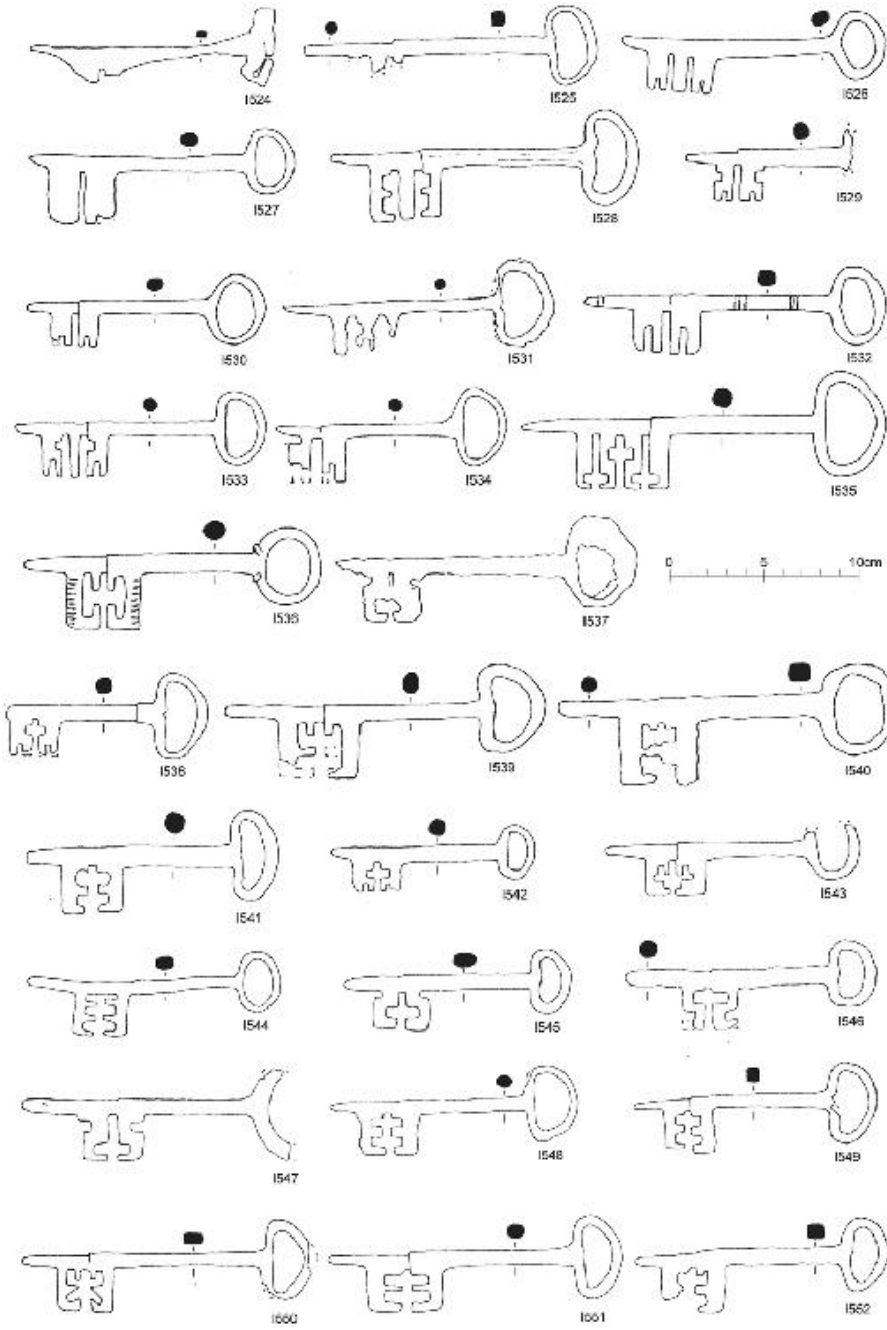



FIGURE 10.30
*Keys*

**I553 KEY**
Beckery Chapel, Glastonbury, Somerset.
Later 13th to?15th century.

Pointed D-shaped bow, possibly with internal mouldings. L 124mm.
Rahtz and Hirst 1974, 61, fig 22.11.

**I554 KEY**
London.
Late 15th to early 16th century.
Kidney-shaped bow, broken stem tip.
L 134mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**I555 KEY**
Thelsford Priory, Warwickshire.
*c*1400 –1536.
Oval bow, externally pointed. L 130mm.
Excavated by Mrs M Gray.

**I556 KEY**
Winchester, Hampshire.
16th century.
Oval bow set at right angles to bit.
L 137mm.
Goodall 1990-21, fig 329.3837.

**I557 KEY**
Winchester, Hampshire.
16th–17th century.
D-shaped bow. Non-ferrous plating.
L 136mm.
Goodall 1990-21, fig 329.3838.

**I558 KEY**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Kidney-shaped bow. Copper base plating.
L 128mm.
Goodall 1979c, 132, fig 21.74.

**I559 KEY**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Oval bow, broken bit. L 155mm.
Goodall 1979c, 132, fig 21.73.

**I560 KEY**
Weoley Castle, Birmingham, West Midlands.
*c*1270 –1600.
Oval bow. L 254mm.
Taylor 1974. For site see Oswald 1962.

**I561 KEY** (not illustrated)
Winchester, Hampshire.
Late 13th–?early 14th century.
Broken ring bow. Moulded stem, tip lost.
Non-ferrous plating. L 125mm.
Goodall 1990-21, 1032, no. 3828.

**I562 KEY** (not illustrated)
Woodperry, Oxfordshire.
12th to 14th century pottery.
Ring bow. L 172mm.
Ashmolean Museum, Oxford, 1873.65 For site see Wilson 1846.

**I563–566 KEYS** (not illustrated)
Woodperry, Oxfordshire.
12th to 14th century pottery.
Oval bowl. L 133, 133, 147 and 169mm.
Ashmolean Museum, Oxford, 1873.70, 71, 66 and 64.

**I567 KEY** (not illustrated)
Northolt Manor, Greater London.
15th century.
Bow and stem broken. L 85mm.
Excavated by J G Hurst.

**I568–573 KEYS**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
5 keys with D-shaped bows, one oval.
Second largest key has grooved stem. L 121, 136, 147, 153, 157 and 136mm.
Goodall 1988, fig 78.70–75.

**I574 KEY** (not illustrated)
Winchester, Hampshire.
16th century.
Broken kidney-shaped bow. L 116mm.

Goodall 1990-21, 1033, no. 3834.

**I575 KEY** (not illustrated)
Winchester, Hampshire.
16th century.
D-shaped bow, internally kidney-shaped.
Knobbed tip to stem. L 133mm.
Goodall 1990-21, 1033, no. 3835.

**I576 KEY** (not illustrated)
Haddlesey, North Yorkshire.
15th–16th century.
Bow broken, stem and bit damaged.
Goodall 1973b, 93, fig 37.14.

**I577 KEY** (not illustrated)
Winchester, Hampshire.
Early 16th century.
Broken oval bow, internally kidney-shaped.
L 112mm.
Goodall 1990-21, 1033, no. 3833.

**I578 KEY** (not illustrated)
Winchester, Hampshire.
Late 15th–early 16th century
Pointed D-shaped bow, stem tip and base of bit broken. L 62mm.
Goodall 1990-21, 1035, no. 3853.

**I579 KEY**
Winchester, Hampshire.
Mid to late 13th century.
Hooked terminal, spirally twisted stem, broken bit. L 46mm.
Goodall 1990-21, fig 330.3857.

**I580 KEY**
Winchester, Hampshire.
Mid to late 13th century.
Hooked terminal, spirally twisted stem, broken bit. L 49mm.
Goodall 1990-21, fig 330.3858.

**I581 KEY**
Goltho, Lincolnshire.

Late 14th to early 15th century.
Plain stem with hooked terminal and spatulate bit. L 78mm.
Goodall 1975a, 83, fig 39.48.

**I582 KEY**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
Plain shank with wavy, hooked terminal and spatulate bit. L 118mm.
Goodall 1975a, 83, fig 39.47.

**I583 KEY**
Bedford.
Late medieval.
Oval bow, internally kidney-shaped
L 67mm.
Baker *et al* 1979, 281, fig 176.1425.

**I584 KEY**
Thelsford Priory, Warwickshire.
16th century, before 1536.
Broken ring bow, bit damaged and incomplete. L 63mm.
Excavated by Mrs M Gray.

**I585 KEY**
Waltham Abbey, Essex.
?16th century.
Oval bow, internally kidney-shaped. Bit broken. L 78mm.
Goodall 1978d, 157, fig 21.2.

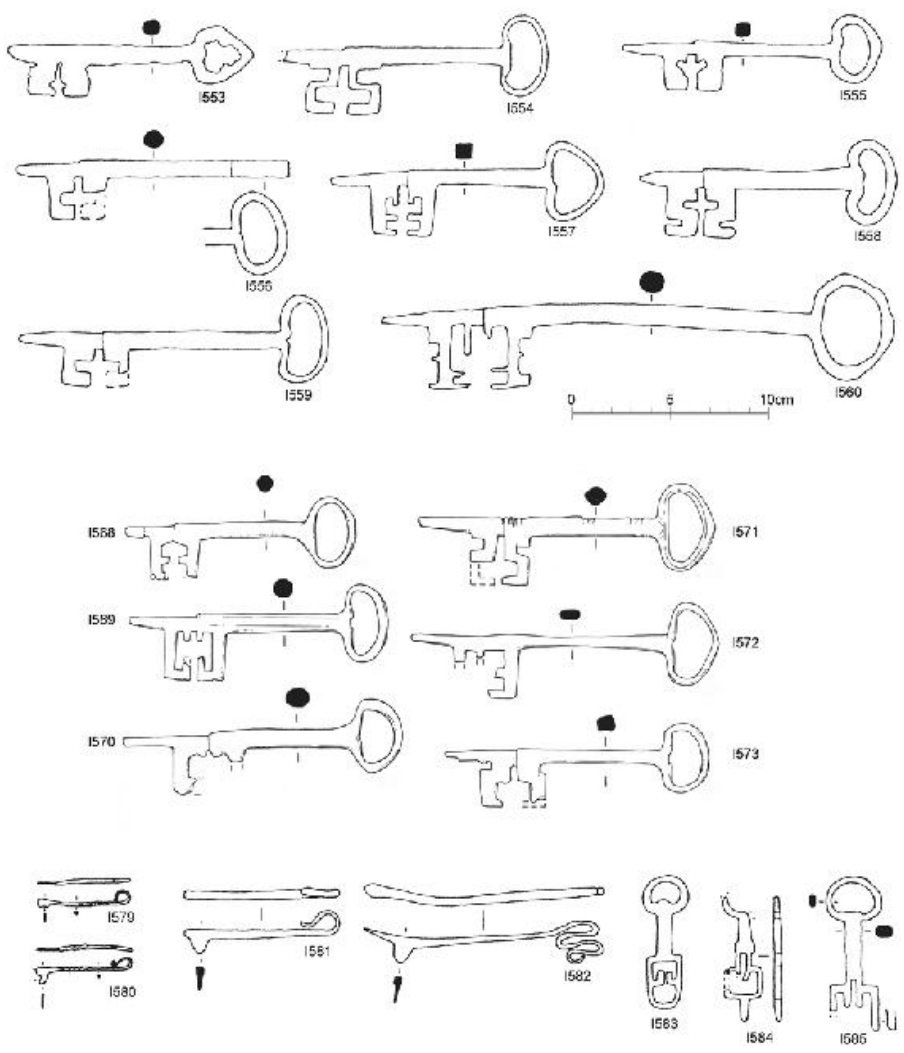



FIGURE 10.31
*Kevs*

# 11
# Household Ironwork

Iron had many uses in the day-to-day running of households, particularly those connected with fires and cooking. It was also used for candlesticks and other fittings including buckets, hooks, balances and chains.

## 11.1 The Hearth

Medieval great halls were frequently heated by a central hearth, although this was gradually superseded by the wall fireplace, already known in storeyed buildings in the 11th century (Wood 1965, 257, 261). It remained in universal use in the medieval peasant house, however, in which it comprised either a fire lit directly on the floor or a hearth with a stone or tile base (Beresford and Hurst 1971, 98). Iron fittings associated with fires include firedogs, fire-forks and pokers.

### Fire-dogs

The fire-dog was probably mainly used in the halls and kitchens of manor houses, castles and monasteries where it supported burning logs on the fire and assisted the flow of air to them. Post-medieval fire-dogs (Lindsay 1964, 7–9, figs 2–16) are of two types with two uprights joined by a horizontal bar or a single upright and an L-shaped bar. **J1**, found in the drain adjacent to the kitchen at Bayham Abbey, East Sussex, is the upright from a firedog with two legs, a scrolled top and a hole for a horizontal bar. It is impossible to tell whether it was used alone or was coupled to another upright.

### Fire implements

Tongs, fire-forks, pokers and shovels are likely to have been used to maintain and clear away fires. **J2** is a fire-fork, originally mounted on a wooden handle and used to manipulate logs of wood at a distance from the heat of the fire.

**A93** is a similarly socketed poker from the same site, although it came from the smithy hearth. **J3** may be a domestic poker. It is entirely of iron and has a suspension hook and ring.

## 11.2 The Kitchen

Representations of cooking and food preparation often include pot-cranes, cauldrons and other vessels, flesh-hooks, ladles and cleavers, and many of these were of iron, although bronze was used for vessels such as skillets, colanders and skimmers. Not all of these classes are as yet represented by objects, gridirons and baker's peels, for example, are as yet absent.

### Pot-cranes

Cauldrons are occasionally shown slung from a bar placed across a fire, as in the Bayeux Tapestry (Stenton 1957, 171, pl 48), but they more usually appear suspended from pot-cranes as in the Maciejowski Bible (Hartley and Elliot 1931, pl 4a) or the Holkham Bible (Hartley and Elliot 1928, pl 10d). **J4** is a pot-crane similar to the latter, although it is in three and not two parts and has an upper swivel to give manoeuvrability to the cauldron. The swivel fitting may have been attached directly to the building or have hung by a chain from a bar across the chimney flue.

**J5** is probably a suspension link from a pot-crane.

### Vessels

Medieval cauldrons seem to have been of copper alloy, the ubiquitous cast-iron cauldron being of post-medieval date, although it is possible that some large iron handles are from cauldrons rather than buckets.

No iron pan like that of the late 9th or first half of the 10th century from Winchester is yet known from a medieval context (Biddle and Quirk 1962, 184–186, fig 8). **J6**, a rectangular pan with an expanding hollow handle, may have had a similar use.

Medieval jugs, ewers, bowls, skillets and strainers are frequently of cast or sheet copper alloy, but occasionally some had iron handles like **J7** which is probably from a strainer. Its curved arms were riveted through the vessel rim.

## Trivets and brandreths

Trivets **J8–13** are stands used to support vessels when they are off the fire (Lindsay 1964, 14, figs 51–58), and they comprise a flat plate or ring standing on three or more legs. **J8–10** have circular rings, **J11** is oval, **J12** triangular and **J13** has been reconstructed with five sides. **J8** and **J12** had three legs, **J13** probably five, and the others are incomplete.

Most of the trivets are plain, although **J8** has some simple chiselled decoration. **J12** has a triangular ring, open internally, but the need to give some support to vessels is indicated by the inner forked projections on **J8** and **J9**, and by the probable intersecting arms of **J13**.

The brandreth resembles the trivet in being a ring on legs (Lindsay 1964, 26, figs 122 and 161), but it was intended for use over the fire with the vessel generally sitting within a vertically sided ring. It was also sometimes used to support a griddle plate. No medieval example is yet known.

## Griddle plates

Griddle plates used for baking oatmeal and small cakes are flat, circular iron plates used recently either on a brandreth or, if provided with a semicircular handle, suspended from a pot hook. **J14**, a fragmentary griddle plate, was found near a burnt area and had probably been used directly on a fire or on hot ashes derived from one.

## Flesh-hooks

Flesh-hooks were mainly used to extract meat and other items from cooking vessels placed over fires, and there are two medieval types: Type 1 with two or three hooked arms set on a short angled stem, Type 2 generally with three hooked arms at the end of a long tanged or socketed stem. Type 1 flesh-hooks **J15–23** are medieval examples of an established pre-Conquest type which was probably little used after the 13th century, which is when the succeeding Type 2 (**J24–30**) appears to have been introduced. **J31–32** are probably socketed arms from Type 2 flesh-hooks.

Flesh-hooks of Type 1 have either two or three hooked arms split from the same tang, but those of Type 2 normally have three arms formed by forging a U-shaped double hook onto the hooked end of the main stem. **J28** is unusual in having only two arms, **J30** in having four. Both types of flesh-hook were

generally hafted on wooden handles which enabled them to extract food from vessels over burning fires. The later type is more efficient and hygienic than the earlier, providing a sounder hafting and keeping the wooden handle out of the food. The earlier flesh-hooks were hafted by embedding the hooked or angled tang in the end of the wooden handle, in the manner indicated by an example in the Bayeux Tapestry (Stenton 1957, pl 48, 171), while the handle of the later type was placed well away from the hook (Hartley and Elliot 1931, pl 4a). **J30** had no wooden handle at all and instead a short flattened and looped iron handle forged in one with the stem.

## Ladles

Shallow ladles were sometimes used as skimmers, but **J33–35** are true ladles with deep bowls and solid iron handles set either in line with or obliquely to the bowl. **J36** is probably the handle from a ladle, it is too thick to be from a spoon.

## Spoons

Medieval spoons were of wood, horn, bone, pewter, latten, and silver, but only rarely of iron. **J37** is of iron, and from a context of *c*1350–1450, although its form cannot be paralleled amongst spoons of more noble metals until the second half of the 17th century. It is similar, however, to an iron spoon from a mid 16th-century context at Caldecote, Hertfordshire (Cool *et al* 2009), and the contradictory typological dates are best ascribed to the differing properties of the various metals. **J37** is forged in a shape natural to iron, unlike the slender rod-like stems with finials found on other contemporary spoons (Ward Perkins 1967, 128–133).

## Cleavers

Cleavers were used to chop up animal and fish meat, and it is probable that **J38–42** were used to cut joints from carcases which had themselves been cut up by cleavers similar to **J43–44**. Several of the cleavers (**J44**, **J46–47**) have suspension hooks or loops on the blade or handle, and the handles are either solid or have whittle or scale tangs. **J38** and **J45** are both solid handles with depressions close to the end perhaps intended to assist the grip. The substantial

blades are all straight-backed and several are burred from hammering.

## Fish hooks

Fish bred in fishponds and caught in rivers or the sea were an important item in the medieval diet, and excavations at Great Yarmouth produced 19 species (w heeler and Jones 1976, 208–224). Fewer were recorded at k ing's Lynn (w heeler 1977). Nets may have been used to catch certain fish, but most could have been caught on baited hooks of which **J48–71** are selected medieval examples.

The majority of medieval fish hooks have barbed points, the complete examples (**J48–59**) generally having flattened heads for attachment to the line, although **J60** has an eyed shank, as has the incomplete hook **J64**. **J61– 62** and **J70–71** have plain points, the first two retaining flattened heads. **J65** is incomplete, but like the other broken fish hooks included it complements the size range of the complete examples.

Fish hooks **J48-71** vary considerably in size, and the smaller ones may have been used to catch smaller species of fish such as whiting, plaice, small cod, sole and flounder, the larger hooks species such as cod, ling, conger eel, spurdog, large haddock, turbot and halibut. Cod, ling and conger eel are three common fish in medieval contexts, and each can grow to a weight of around 40–50kg.

The hooks have rounded or slightly flattened bends with the point generally either parallel to the shank or slightly open; the incurved point of **J68** is probably distorted. These open hooks are advantageous with active fishing techniques such as lining, which was practised in the medieval period, rather than with passive fishing methods such as fishing with floats. The barbed hook, in the majority amongst medieval fish hooks but although not necessary when a hook was kept in constant tension, was evidently preferred. The barb kept the bait in position and stopped the hook coming out of the fish once it had penetrated. The barbless hook might avoid damage to fish, but it is not well represented amongst medieval fish hooks. When in use for lining, hooks were fastened to a line by means of a short snood whipped onto the commonly found flattened heads, or attached through the eye. The eye, however, is restricted to the larger hooks.

# 11.3 Lighting

Domestic lighting was obtained from lanterns, torches, lamps and candlesticks. Lanterns and torches or flares were used to guide the way, and torches were also set in wall-mounted iron rings to provide illumination, but lamps and candlesticks probably provided most internal lighting.

Cresset lamps with oil and a floating wick take the form of a bowl standing on some form of foot, or of a funnel-shaped bowl with a downward projection to allow suspension (Ward Perkins 1967, 174–176).

Medieval candlesticks are of iron and copper alloy, and of varying types. Tapers may have lit the candles and wicks, but at some stage a steel or strike-a-light must have started the fire.

## Candlesticks

An indication of the range of types of medieval candlestick is provided by an entry in the Black Book of the Household of Edward IV (Myers 1958, 90):

> Item, for the king and his chambyr also, when the day shortnyth and no prees of grete straungers, iij torches, j tortayis [very large wax candle], and iij prikettes [candles stuck on pricket candlesticks] for the table and cupbourde, if hit be not fasting day; vj perchers [large wax 'Paris' candles], x candyls wax for syzes of chamber, ij morters wax [bowls with floating wicks] every nyzt.

Candlesticks were used for work as well as for domestic purposes. Accounts (Salzman 1967, 62) record the purchase of candles for work at night, and at Clarendon Palace in 1482 there is payment to Thomas Warmewell for going down into the well to cleanse it and for 'great candles called talowe perchers for lighting the said Thomas at the bottom of the well and burning there for 4 days' (Salzman 1967, 278).

Medieval candlesticks, more commonly of iron than copper alloy, are either of pricket type, the end of the candle being impaled on a spike, socketed, composite or three-armed.

### *Pricket candlesticks*

Pricket candlesticks were used by impaling the candle on the pricket spike which in its simplest form might be no more than a tapered rod set in a wooden beam or on a bracket. A moulded stone bracket at Norrington Manor House, Alvediston, Wiltshire, of *c*1377, retains two such iron spikes on its upper surface (Wood 1965, 366, pl LVIIG).

Excavated pricket candlesticks **J72–81** have single pricket spikes set on

straight stems with either one (**J72**) or two (**J73–81**) side scrolls, **J79** has additional side arms, both unfortunately incomplete.

The stems of **J72–79** are straight, that of **J80** is angled, and each would have been set in a wooden base or appropriate socket. **J82** is altogether more elaborate, and recalls with the form of its moulded stem and tripod base such medieval folding copper-alloy candlesticks as those from York (Wenham 1972, 95, fig 20.7) and Laverstock, Wiltshire (Musty *et al* 1969, 149, fig 28.3). It has a pair of pricket spikes set to either side of a simple finial and a small wax pan of more aesthetic than practical value. These pricket candlesticks come from 12th to 15th-century contexts.

## *Socketed candlesticks*

Socketed candlesticks are the most common type of iron candlestick, and they take the form of a candle socket set on the end of a straight, angled or cranked stem, or in a wax pan. The socketed candlesticks with straight stems, **J83–93**, vary in length and may have been used in an equivalent way to straight-stemmed pricket candlesticks. Those with angled stems, **J94–112**, have sockets which butt the horizontal bar or are set on short or tall uprights, and their sockets are variously outwardly, inwardly or occasionally centrally set on the upright arm. **J113–115** have cranked stems. Most of these stems are plain, but five are of spirally twisted iron, a simple type of decorative forging also found on objects such as flesh-hooks and hasps.

The three candlesticks with wax-pans **J116–118** differ in detail. **J118**, the most complete, has its handle and candle socket held to the wax-pan by a common rivet, but **J117** has its handle forged in one with the wax pan and a separately welded candle socket. **J116**, a wax pan, evidently resembled **J118**. These three iron candlesticks are quite sophisticated and they resemble some of copper alloy, including that from Writtle, Essex (Rahtz 1969b, 91, fig 51.118).

Socketed candlesticks were in common use from the 13th century onwards, those with angled stems being most common. The more elaborate type with its wax pan is principally of 14th to 15th-century date.

## *Composite candlesticks*

A number of medieval candlesticks combine the pricket spike with a socket, the most elementary being **J119** which has the two arms springing from the same stem and barely separating. **J120** similarly combines a single pricket and

socket, but the socket is set on an angled arm. The sockets of **J119–120** are not the fully developed, closed sockets of candlesticks **J83–117**, but rather open sockets onto which candles may have been impaled. The two candlesticks come from 12th to 14th-century contexts.

### *Three-armed candlesticks*

**J121–128** are three-armed candlesticks set on central stems, the more complete examples (**J121–122**, **J125** and **J128**) generally having a central pricket between side sockets, although **J126–127** have split terminals. Candles must have been impaled onto all except **J128** which has closed sockets. These three-armed candlesticks are mainly from sites with ecclesiastical connections, **J121– 123** from a monastic grange and **J125–127** from Rievaulx Abbey, and it is possible that they at least originated as ecclesiastical rather than domestic fittings. They are found in 12th to 16th-century contexts.

## 11.4 Fire-Steels

Fire-steels were used in conjunction with flints to create sparks and ignite tinder. **J129–133** have rectangular blades, only the latter showing signs of wear, and all have hooked tips or curved arms to allow them to be held and struck. The holes at the inner ends of **J129–130** imply that they were mounted in folding handles. **J134** is a later type of fire-steel comparable to others from the medieval and later site of Urquhart Castle, Highlands (Laing 1974– 75, 154, fig 14. 13–14).

# 11.5 Buckets

Medieval wells have produced several complete buckets in addition to some of their component wood and iron parts. **J135–139** are complete wooden buckets of stave-built construction which differ in their detailed methods of assembly, some having iron hoops, others withies, and their variously shaped iron handles may ride in looped or eyed straps nailed to the bucket side. These individual items are described in succession below.

## Bucket hoops

The staves of buckets **J135–139** all have plain edges which butted the adjacent staves and were held together by an outer binding. **J137** was evidently bound by withies, but pairs of iron hoops of canted section bind all the other buckets. **J140–143** are variously complete and incomplete individual hoops, all of canted section and therefore from buckets with sloping sides, and none exceeds the diameter of the complete buckets. The hoops were evidently sprung into position since none, not surprisingly, has any evidence of nail-holes.

## Handle loops and straps

Iron U-shaped loops and eyed straps frequently strengthened the holes in wooden staves through which bucket handles passed, serving to relieve the wood of some strain and prevent breakage. Complete buckets **J135** and **J138**, however, lack such mounts, although **J138** retains its iron handle. This may imply that **J135** once also had an iron handle, and not a rope one as has been suggested.

**J144–147** are individual U-shaped loops similar to those on complete buckets **J136** and **J139**, where they either rise above the rim or are set on the inside of projecting staves. **J148–154** are eyed straps, **J148–149** almost identical in shape to those nailed to the inside of the complete bucket **J137**. It is probable, nevertheless, that some of the eyes projected above bucket rims.

## Handles

**J155–162** are iron handles, the majority probably from buckets or pails, although some may be from cauldrons or other vessels. **J155–157** resemble those on buckets **J136–139**, all being gently curved and having hooked ends in line with the handle. Most are plain, but **J155** has a central expansion to ease pressure on the hand when being held. **J138–139** and **J157** are specifically intended for use in a well, all having a central perforated expansion housing a swivel hook. Chains associated with the first two buckets were evidently used in conjunction with a rope to haul them up wells.

The small handles **J158–160** with transversely set hooked ends may be from small buckets or pails. **J158**, found near what may have been the hoop from a wooden bucket, has an expanded centre, but **J159–160** are slighter and of spirally twisted iron, and their precise use is uncertain.

## 11.6 Hooks

Hooks of a number of types were used in and around buildings, S-hooks like **J163–167** being used to hang meat from hooks or staples in kitchens and pantries. **J168** could be a bag hook or baling hook, and the find-spot of **J169** in a well implies that it was used to retrieve buckets. **J170–173**, no doubt hafted on long wooden handles, could have been used as boat hooks, fire hooks or wall hooks, and **J174**, a large draghook, was probably used to clear the moat at w eoley Castle, Birmingham (West Midlands). The use of hooks **J176–179** is uncertain, although in some respects they resemble flesh-hooks.

## 11.7 Balances

The equal-armed balance was the common instrument used for weighing during the medieval period, and small examples such as those from Wallingstones (Bridgewater 1970–72, 104, 112, fig 20) and Goltho (Goodall 1975a, 95, fig 44.37), with rigid and folding beams respectively, are normally of copper alloy. **J180–182** are iron equivalents of the former type, used in conjunction with pans suspended from each end of the beam. **J183** is the suspension stirrup from another balance.

Lead-filled, latten-covered steelyard weights, common finds of 13th-century and later date (Ward Perkins 1967, 171–174), were used with unequal-armed balances like **J184**. This had a wooden beam with graduations along it for the weight and two fulcrums with suspension rings, one or other of which was used according to the weight of the load suspended from the hook. A detailed description of the use of **J184** is given in Shortt 1968.

## 11.8 Chains, Links and Related Fittings

Chains and links had a multitude of uses, small chains generally of copper alloy forming part of costume, and larger chains being used in horse harness or around buildings supporting cauldrons over fires, holding doors and gates open or closed, tethering animals, or drawing buckets from wells. They are also, but less commonly, found as part of limb shackles, as on **I80**, **I81** and **I90**. Links and chains, some with hooks, rings or swivel fittings, are described

according to individual link shape, and isolated examples of their fittings are then catalogued.

## Circular links and rings

**J185** is part of a chain of small circular links which is probably from costume, although such chains are normally of non-ferrous metal. **J186–196** are individual rings of various sizes, some no doubt from chains like **J185**, or components within them (**J203**, **J206–208**, **J215**), although they could be buckle frames like **K218**, **K221** and **K223**. **J186** with its leather strap is certainly from a shoe, and **J193–194** from a belt. **J190–192** are also large enough to be strap distributors from spurs, as on the effigy of John of Eltham (Ward Perkins 1967, fig 30.5), and rings the size of **J193–195** could be strap distributors from harness like **L103–104**. The partly spirally twisted **J196** may be a ring handle from a cupboard door. Larger rings are discussed below, **J277–287**.

## Rectangular links

**J197–200** may have acted as strap distributors like **L102** or be belt links.

## Oval links

**J201–204** are oval links, **J203** unusually having overlapping ends and carrying a small ring.

## Straight-sided links

**J205–214** are straight-sided links, the smallest forming chain **J206**, the largest, **J214**, a chain with a swivel hook. **J209–210** also have swivel hooks, the latter coming from a hearth in a cooking area and so possibly used in conjunction with a hook to support a cauldron.

## U-shaped links

**J215** has a chain which combines rings and pivoting U-shaped links. It comes from a hearth in a cooking area where it may have supported a cauldron.

## Figure-eight shaped links

**J216–239** are figure-eight links of varying size, most flat but **J224** is a chain incorporating one flat and one twisted link. The figure-eights is the most common medieval type of link, the shape giving a strength not necessarily found in the other forms. The shape of individual links varies from the openness of **J225** and **J238** to the tightness of **J229** and **J237**. **J216–217**, **J220** and **J226** support small hooks and may have been used for suspension rather than for linking or closing, whereas **J237** and **J239** come from wells where they were probably used in conjunction with buckets **J138** and **J139**. **J233** retains the U-shaped staple which held it in place.

## S-shaped links

**J240–243** are chains with S-shaped links, **J240** and **J243** flat, **J241–242** twisted. **J240–241** are small and probably from costume, although they are too coarse to be from jewellery and may be from chatelaines. **J242–243** are large links.

## Swivel rings and hooks

Swivel rings and hooks on the ends of chains such as **J209–210** and **J214** gave freedom of movement to whatever was attached to them, and **J244–263** are individual examples. **J244–248** are complete swivel hooks and rings, **J247** coming from a limb shackle, **J248** probably from the shaft of a harrow, plough or cart. **J249–255** are swivel rings, **J256–263** swivel hooks, all of differing sizes. The small swivel hooks may be from harness straps or curb bits, but the larger ones must have supported cauldrons or have had uses similar to those suggested for **J248**.

## Double swivel rings

**J264–266** are paired swivel rings which may have been used to give movement at the junction between two chains, and some of the swivel rings **J249–255**

may be from similar fittings.

### Miscellaneous swivel fittings

**J267–269** are swivel hooks with extended arms, that of **J269** also angled. The larger ones may be from pot-crane supports, **J268** resembling the upper member of **J4**. **J270** is a swivel rod with a flattened and perforated tip, and **J271** is a swivel loop with opposing knobbed terminals.

**J272** is a complicated fitting, the main swivel ring and hook supporting a cage to which two further hooks and side arms are attached. The side arms are unusual in having sprung, hinged clips.

### Looped hooks

Chains **J216–217**, **J220** and **J226** have looped hooks attached to the bottom link, and **J273–275** are further individual hooks with hooked or closed looped eyes. **J276** has a sprung loop similar in operation to the side arms of **J272**. It is surprising that this spring closure was not used more widely, since it is merely an adaptation of the spring arrangement of medieval box and barrel padlocks.

## 11.9 Rings

Rings **J277–287** are a representative sample of the larger rings from medieval contexts, smaller rings **J185–296** are discussed above. A number of these rings may also be from buckles (cf **K218**, **K221** and **K223**), or from chains (cf **J206–208** and **J215**), and the presence of nonferrous plating on **J283** is not certain evidence that it is a buckle frame since rings from snaffle bits are frequently plated. **L49** and **L51–52** have such rings, 30, 64 and 32mm in diameter. Some of the largest rings may be from ring handles such as **H654–655** from doors and furnishings.

## 11.10 Washers

**J288–290** are flat circular washers which may have been used with bolts.

## 11.11 Collars

**J291–311** are circular and rectangular collars used to bind wood and strengthen it, some of them with crudely overlapped ends, others fully forged. The circular collars vary most in width or length, as **J291–306** demonstrate. Small collars on various medieval objects include those on the handles of weedhook **F55** and knives **G96** and **G355**, as well as on curry-combs **L35** and **L44** and snaffle bit **L63**.

**J1 FIRE-DOG** (not illustrated)
Bayham Abbey, East Sussex.
Late 15th to early 16th century.
Upright from fire-dog with outward-facing pair of scrolls at head of stem which splits towards base to form two straight legs. Hole for former horizontal bar at point where stem divides. H 407mm.
Goodall 1983a, fig 46.35.

**J2 FIRE-FORK**
Huish, Wiltshire.
Site: 12th–15th century.
Complete two-pronged fork with long stem terminating in a socket with a nail-hole for a former wooden handle. L 742mm.
Shortt 1972, 120, fig 4.29.

**J3 POKER**
Stonar, Kent.
Very late 13th to early 14th century.
Rectangular-sectioned poker with slender handle terminating in a suspension loop and ring. L 567mm.
Excavated by N Macpherson-Grant.

**J4 POT-CRANE** (not illustrated)
Norwich.
In 1507 fire deposit.
Pot-crane in three parts, the 765mm long upper arm having a knobbed head to fit in a missing swivel ring. Attached to this arm is a second one, 640mm long, along which the 470mm long pot hook slides. A loop

through the lower, hooked end of the intermediate arm can be set in any one of seven ratchets on the pot hook, thereby enabling it to be adjusted.

Goodall 1993a, fig 55.559.

**J5 HOOK**

Kirkcudbright Castle, Dumfries and Galloway.

*c*1288–1308.

Double-ended hook. L 301mm.

Dunning *et al* 1957–58, 138, fig 7.4.

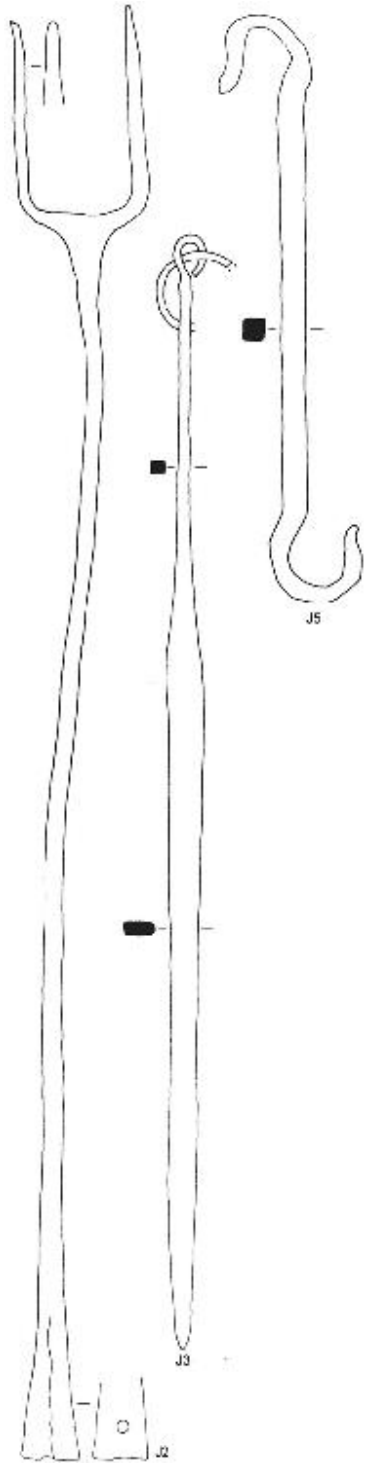



FIGURE 11.1
*Fire-fork, poker and hook*

**J6 PAN** (not illustrated)
Norwich.
In 1509 fire depsit.
Rectangular pan with expanding, hollow, circular-sectioned handle.
Overall length 350mm; pan 193mm by
140mm, 40mm deep.
Goodall 1993a, fig 54.556.

**J7 SKILLET**
**OR COLANDER HANDLE**
Somerby, Lincolnshire.
15th to mid 16th century.
Broken handle with curved arms riveted to rim flange of non-ferrous skillet or colander.
Complete arm has simple terminal.
L 124mm.
Mynard 1969, 85, fig 13.IW 92.

**J8 TRIVET**
Cambokeels, Durham.
Later 14th to early 16th century.
Flat circular ring with three broken legs, the most complete a welded-on repair. Top of two original legs and inner forked projection decorated with simple chiselled lines. D 226–242mm.
Hildyard and Charlton 1947, 194, pl V II.

**J9 TRIVET**
Bolton, Fangfoss, Humberside.
Early 14th century.
Broken flat, circular ring with inner forked projection. L 198mm.
Goodall 1978b, 143, fig 30.20

**J10 TRIVET**
Thuxton, Northamptonshire.
Site: 12th–14th century.
Broken flat circular ring with stub of one leg.
L 130mm.
Excavated by L A S Butler.

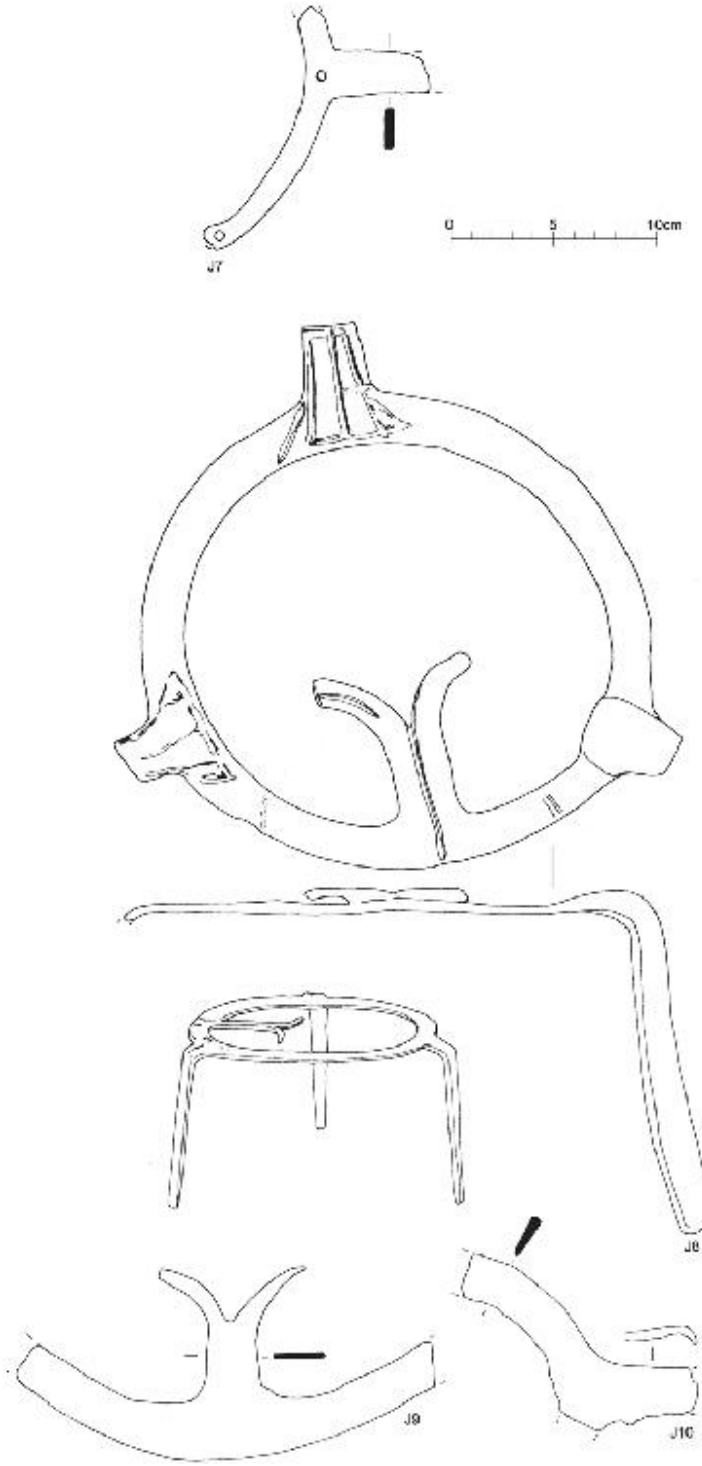



FIGURE 11.2
*Skillet or colander handle and trivets*

**J11 TRIVET**
Llawhaden Castle, Dyfed.
Medieval.
Broken, flat, oval ring retaining one leg.
L 142mm.
National Museum of Wales, Cardiff,
40.135/3.

**J12 TRIVET**
Northampton.
13th–14th century.
Flat, three-sided ring with stubs of three legs.
W 253mm.
Goodall *et al* 1979, 273, fig 120.85.

**J13 TRIVET**
Winchester, Hampshire.
15th century.
Broken leg and part of flat, five-sided ring with inner projection. L 122mm.
Goodall 1990-14, fig 242.2545.

**J14 GRIDDLE PLATE**
Beere, Devon.
End 12th to 13th century. Found near burnt area.
Incomplete circular griddle plate, originally about 4mm thick. D 180mm.
Jope and Threlfall 1958, 138, fig 34.1, scale 1:2, not 1:3.

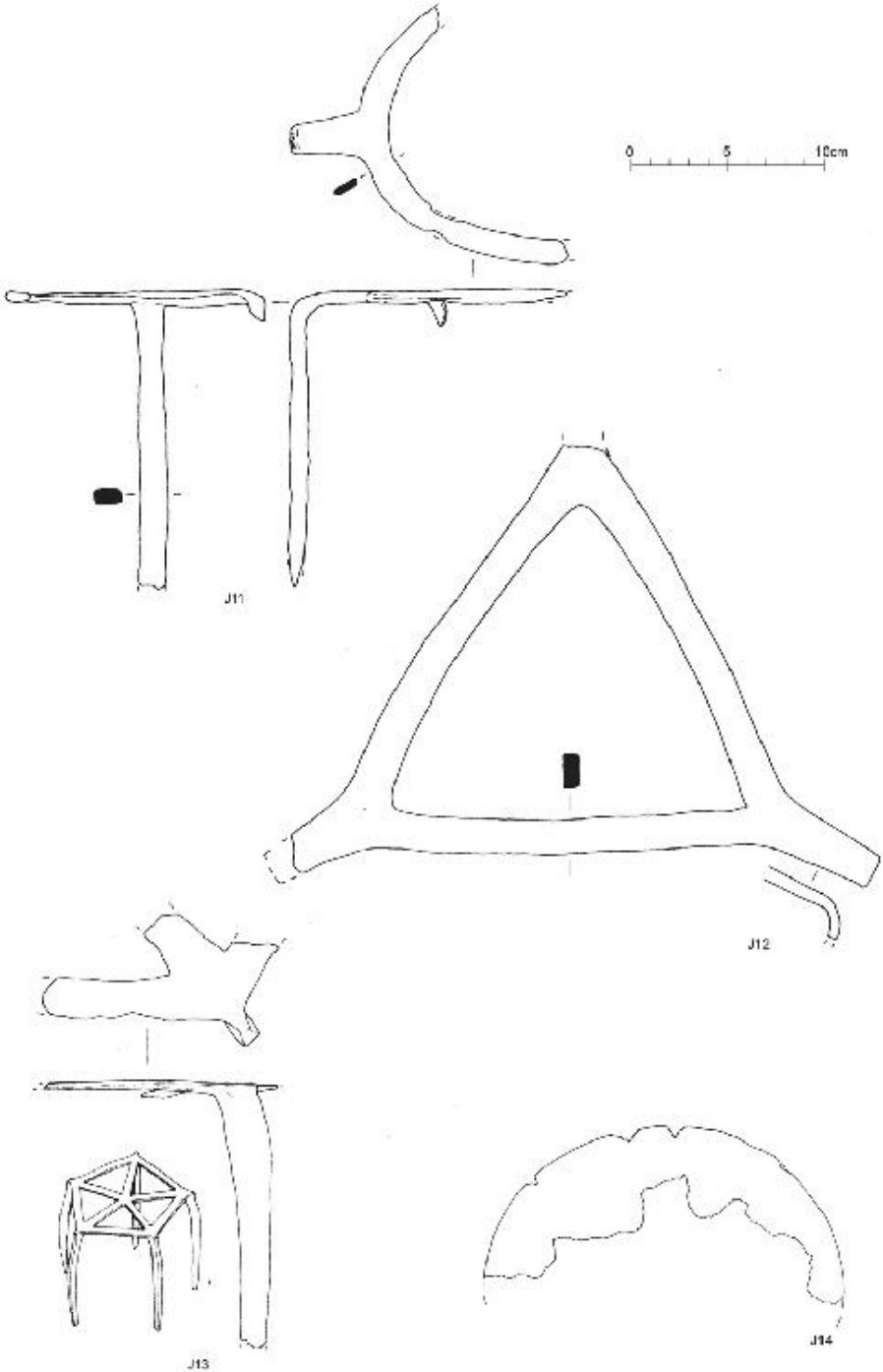



FIGURE 11.3
*Trivets and griddle plate*

**J15 FLESH-HOOK**

Goltho Manor, Lincolnshire.
11th century.
Two hooked arms, broken tang. L 80mm.
Goodall 1987, fig 159.119.

**J16 FLESH-HOOK**
North Elmham, Norfolk.
Early medieval, from 11th century.
Two hooked arms, angled and broken tang.
L 112mm.
Rigold 1962–63, 98, fig 35.10.

**J17 FLESH-HOOK**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Two hooked arms and shank all broken.
L 52mm.
Excavated by P J Fowler.

**J18 FLESH-HOOK**
Goring-by-Sea, West Sussex.
13th century.
Two hooked arms with tang with clenched tip set at right angles. W 62mm.
Barton 1965, 91, fig 3.9

**J19 FLESH-HOOK**
Brooklands, Weybridge, Surrey.
1200–1325.
Two hooked arms, one incomplete. Tang broken. L 92mm.
Goodall 1977d, 73, fig 45.18.

**J20 FLESH-HOOK**
Clough Castle, Co. Down.
*c*1250 to early 14th century.
Two hooked arms, one distorted and straight.
Tang broken. L 70mm.
Waterman 1954, 140, fig 12.8.

**J21 FLESH-HOOK**
Winchester, Hampshire.
*c*1070–71.

Three hooked arms, tips broken. Tang broken and distorted. L 111mm.
Goodall 1990-14, fig 242.2548.

**J22 FLESH-HOOK**
Old Sarum, Wiltshire.
Principally medieval, to 14th century.
Three hooked arms, tang tip hooked round and broken. L 83mm.
Salisbury and South Wiltshire Museum,
Salisbury, O.S.C144, 30/1920–21.

**J23 FLESH-HOOK**
Huish, Wiltshire.
Site: 12th to 15th century.
Three hooked arms and tang all broken.
L 66mm.
Shortt 1972, 120, fig 4.30.

**J24 FLESH-HOOK**
Winchester, Hampshire.
13th century.
Broken, spirally twisted stem. One of three original hooked arms survives. L 176mm.
Goodall 1990-14, fig 242.2551.

**J25 FLESH-HOOK**
Wythemail, Northamptonshire.
Early 13th century. From post-hole in C3.
Three hooked arms, broken shank.
L 121mm.
Hurst and Hurst 1969.

**J26 FLESH-HOOK**
Northolt Manor, Greater London.
1300–50.
Three hooked arms and tang. L 204mm.
Hurst 1961, 289, fig 76.16.

**J27 FLESH-HOOK**
Cambokeels, Durham.
Later 14th to early 16th century.
Three hooked arms, two broken. Spirally twisted shank with socket. L 273mm.

Hildyard 1949, 196, fig 5.2.

**J28 FLESH-HOOK**
Writtle, Essex.
*c*1425–1521.
Two hooked arms, one broken. L 116mm.
Rahtz 1969b, 87, fig 48.76.

**J29 FLESH-HOOK**
Northampton.
15th–16th centuries to post-18th century.
One hooked arm and part of shank from flesh-hook originally with three hooked arms. L 150mm.
Goodall 1979b, 71, fig 17.27.

**J30 FLESH-HOOK** (not illustrated)
Norwich.
In 1509 fire deposit.
Broad, looped handle tapering to slender shank with four hooked arms, one complete.
Overall length 543mm. Looped handle
170mm long, complete arm 50mm wide.
Goodall 1993b, fig 83.740.

**J31 FLESH-HOOK**
Lyveden, Northamptonshire.
Site: second quarter 13th to very early 14th century.
Socket with nail-hole and broken shank, probably from flesh-hook. L 101mm.
Bryant and Steane 1969, 43, fig 18f.

**J32 FLESH-HOOK**
Staines, Surrey.
1300–1500.
Socket and broken shank, probably from flesh-hook. L 117mm.
Excavated by k Crouch.

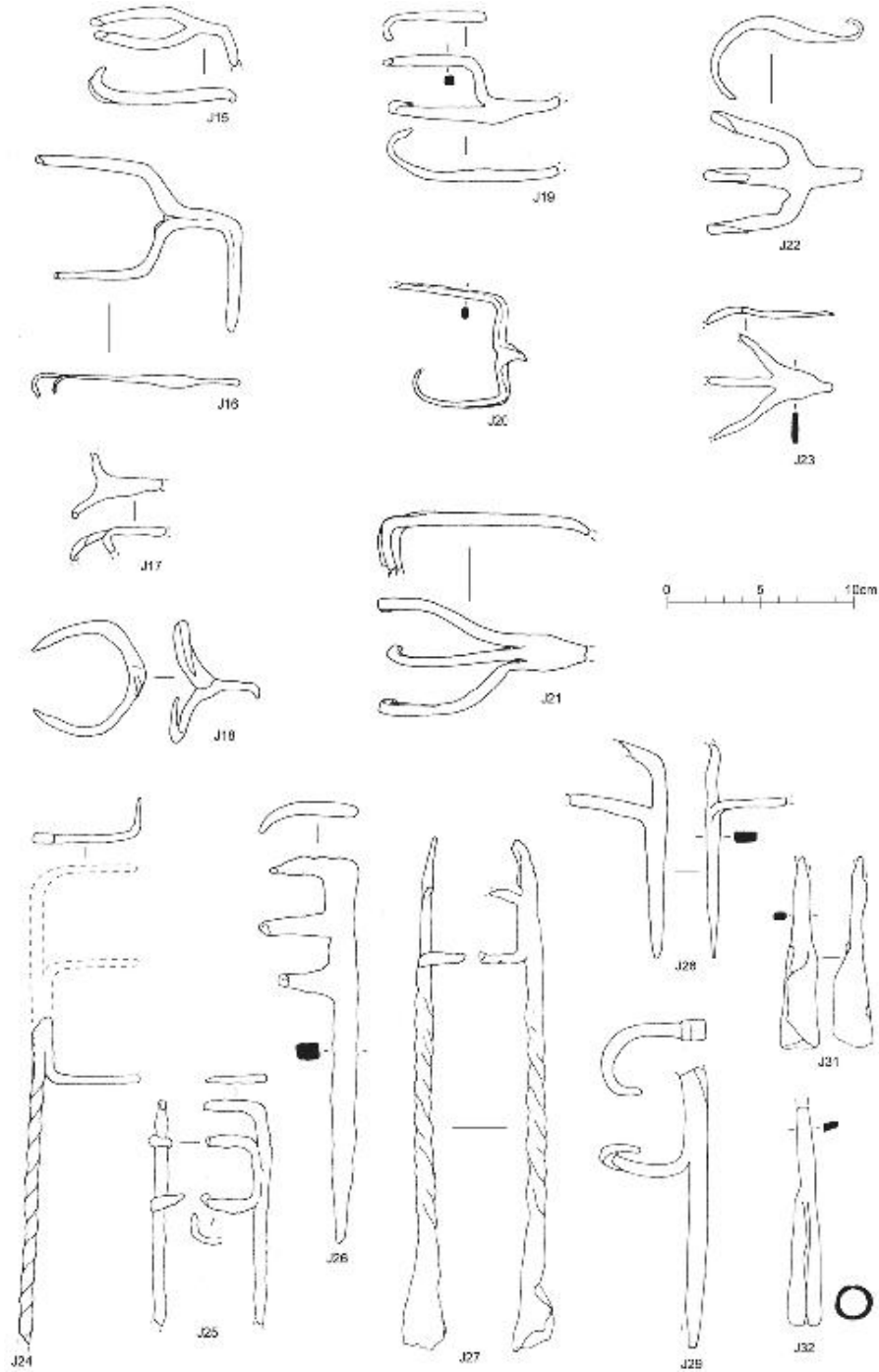



FIGURE 11.4
*Flesh-hooks*

**J33 LADLE**

Winchester, Hampshire.
Late 12th–early 13th century.
Oval bow and shaped horizontal handle bolt broken. L 111mm.
Goodall 1990-14, fig 243.2554.

**J34 LADLE**
Winchester, Hampshire.
Mid to?late 13th century.
Oval bowl and angled handle both broken.
L 91mm.
Goodall 1990-14, fig 243.2555.

**J35 LADLE**
Baconsthorpe Castle, Norfolk.
*c*1440 –1650.
Damaged oval bowl, broken handle set at a slight angle. L 258mm.
DAMHB Collection, London, BAC 4.

**J36 LADLE**
Staines, Surrey.
1300–1500.
Plain handle, bowl lost. L 137mm.
Excavated by K Crouch.

**J37 SPOON**
Broughton, Lincolnshire.
*c*1350–1450.
Broken bowl and stem, the latter expanding towards a simply shaped, slightly downturned terminal. L 182mm.
Goodall 1974d, 11, fig 3.25.

**J38 CLEAVER**
Goltho Manor, Lincolnshire.
*c*1100–50.
Blade tip lost, solid handle with two shallow depressions towards end. L 265mm.
Goodall 1987, fig 157.66.

**J39 CLEAVER**
Aldringham, Lancashire.
Mid 12th century.
Blade damaged, handle solid. L 230mm.

Excavated by B K Davison.

**J40 CLEAVER**
Weoley Castle, Birmingham, West Midlands.
*c*1230–1270.
Whittle tang incomplete, blade back burred.
L 135mm.
Oswald 1962–63, 132, fig 51.16.

**J41 CLEAVER**
Clough Castle, Co. Down.
*c*1200–c1225.
Blade complete, with thin projection running from upper, inner corner to underside of handle. Handle of square section, thinning to probable scale tang broken across a rivet hole. L 204mm.
Waterman 1954, 137, fig 11.3.

**J42 CLEAVER**
St Catharine's Hill, Winchester, Hampshire.
Early 12th to 14th century.
Complete, cutting edge damaged, blade back burred. L 214mm.
Hawkes *et al* 1930, 246, fig 29.I20.

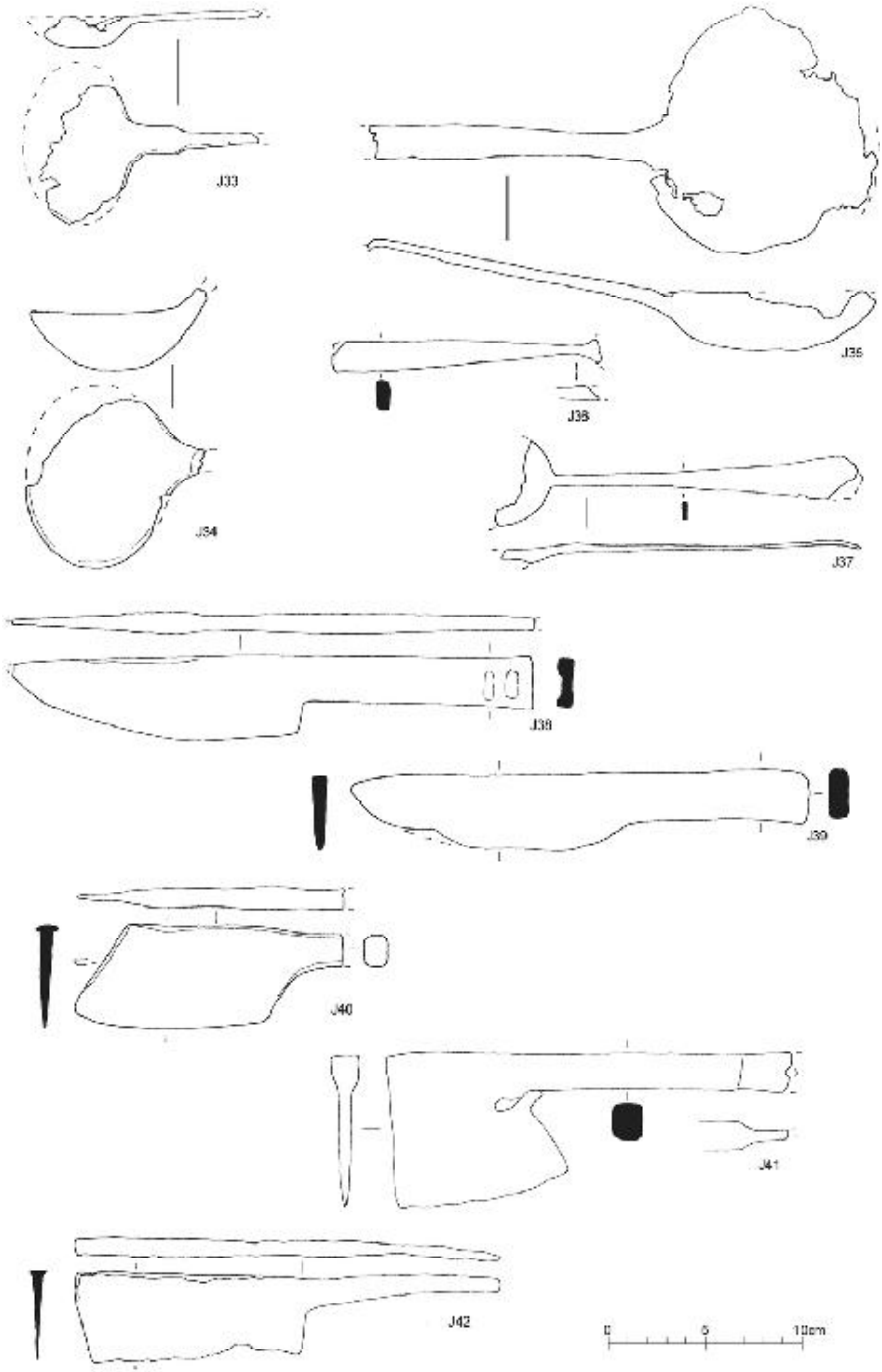



FIGURE 11.5
*Ladles, spoon, and cleavers*

**J43 CLEAVER**

Northolt Manor, Greater London.
1350–1370.
Complete, end-plate and two rivets in scale tang which retains thin mineralised slivers of the wooden handle. L 538mm.
Hurst 1961, 291, fig 76.19.

**J44 CLEAVER**
Huish, Wiltshire.
Site: 12th to 15th century.
Suspension loop and burred back to blade, riveted tang. L 366mm.
Shortt 1972, 120, fig 4.24.

**J45 CLEAVER**
Loughor Castle, West Glamorgan.
Site: *c*1106 to late 13th century.
Broken handle with three shallow depressions. L 100mm.
Excavated by J M Lewis.

**J46 CLEAVER**
Winchester, Hampshire.
?13th century.
Solid handle with hole for suspension.
L 161mm.
Goodall 1990-14, fig 240.2542.

**J47 CLEAVER**
Winchester, Hampshire.
15th–16th century.
Handle with hooked terminal and stub of blade. L 73mm.
Goodall 1990-14, fig 240.2543.

**J48 FISH HOOK**
Stonar, Kent.
*c*1275–1385.
Flat-headed shank, broken barb. L 31mm.
Excavated by N Macpherson-Grant.

**J49 FISH HOOK**
London.
?Late 13th–mid 14th century.
Flat-headed shank, barbed point. L 36mm.
Henig 1974, 189, fig 37.52.

**J50 FISH HOOK**
Stonar, Kent.
*c*1275–1385.
Flat-headed shank, barbed point. L 40mm.
Excavated by N Macpherson-Grant.

**J51 FISH HOOK**
Stonar, Kent.
*c*1225–1275.
Flat-headed shank, barbed point. L 45mm.
Excavated by N Macpherson-Grant.

**J52 FISH HOOK**
Stonar, Kent.
*c*1275–1385.
Incomplete flat-headed shank, barbed point.
L 53mm.
Excavated by N Macpherson-Grant.

**J53 FISH HOOK**
Holworth, Dorset.
13th–14th century.
Flat-headed shank, barbed point. L 53mm.
Rahtz 1959, 146, fig 12.7.

**J54 FISH HOOK**
Great Yarmouth, Norfolk.
Late 11th or early 12th century.
Flat-headed shank, barbed point. L 61mm.
Rogerson 1976, 166, fig 53.3.

**J55 FISH HOOK**
Pevensey, East Sussex.
13th century.
Flat-headed shank, barbed point. L 62mm.
Dulley 1967, 228, fig 65.5.

**J56 FISH HOOK**
Kilton Castle, Cleveland.
Late 15th century.
Flat-headed shank, broken barbed point.
L 66mm.

Excavated by A Aberg.

**J57 FISH HOOK**
Stonar, Kent.
*c*1100–c1225.
Flat-headed shank, barbed point. L 69mm.
Excavated by N Macpherson-Grant.

**J58 FISH HOOK**
Kilton Castle, Cleveland.
Late 15th century.
Flat-headed shank, barbed point. L 68mm.
Excavated by A Aberg.

**J59 FISH HOOK**
Stonar, Kent.
*c*1225–1275.
Flat-headed shank, broken barbed point. L 96mm.
Excavated by N Macpherson-Grant.

**J60 FISH HOOK**
Stonar, Kent.
*c*1225–1275.
Eyed shank, barbed point. L 90mm.
Excavated by N Macpherson-Grant.

**J61 FISH HOOK**
Great Yarmouth, Norfolk.
Late 11th or early 12th century.
Flat-headed shank, plain point. L 66mm.
Rogerson 1976, 166, fig 53.1.

**J62 FISH HOOK**
Upton, Gloucestershire.
Mid to late 13th century.
Flat-headed shank, plain point. L 59mm.
Rahtz 1969a, 108, fig 12.85.

**J63 FISH HOOK**
Great Yarmouth, Norfolk.
Late 11th or early 12th century.
Flat-headed shank, point broken. L 75mm.

Rogerson 1976, 166, fig 53.2.

**J64 FISH HOOK**
Great Yarmouth, Norfolk.
Mid 11th century.
Eyed shank, broken point. L 123mm.
Rogerson 1976, 162, fig 52.13.

**J65 FISH HOOK**
Great Yarmouth, Norfolk.
Mid to late 11th century.
Shank and point broken. L 69mm.
Rogerson 1976, 166, fig 53.12.

**J66 FISH HOOK**
Winchester, Hampshire.
Mid 13th century.
Shank broken, barbed point. L 25mm.
Goodall 1990-14, fig 240.2540.

**J67 FISH HOOK**
Stonar, Kent.
*c*1225–75.
Shank broken, barbed point. L 38mm.
Excavated by N Macpherson-Grant.

**J68 FISH HOOK**
London.
Later 13th–14th century.
Shank broken, barbed point. L 50mm.
Henig 1974, 189, fig 37.51.

**J69 FISH HOOK**
Castle Acre Castle, Norfolk.
1140s deposit with derived material. Site founded soon after 1066.
Shank broken, barbed point. L 92mm.
Goodall 1982, fig 40, no. 112.

**J70 FISH HOOK**
Upton, Gloucestershire.
Late 13th to late 14th century.
Shank broken, plain point. L 46mm.

Hilton and Rahtz 1966, 120, fig 14.32.

**J71 FISH HOOK**
Pevensey, East Sussex.
13th century.
Shank broken, plain point. L 145mm.
Dulley 1967, 228, fig 65.4.

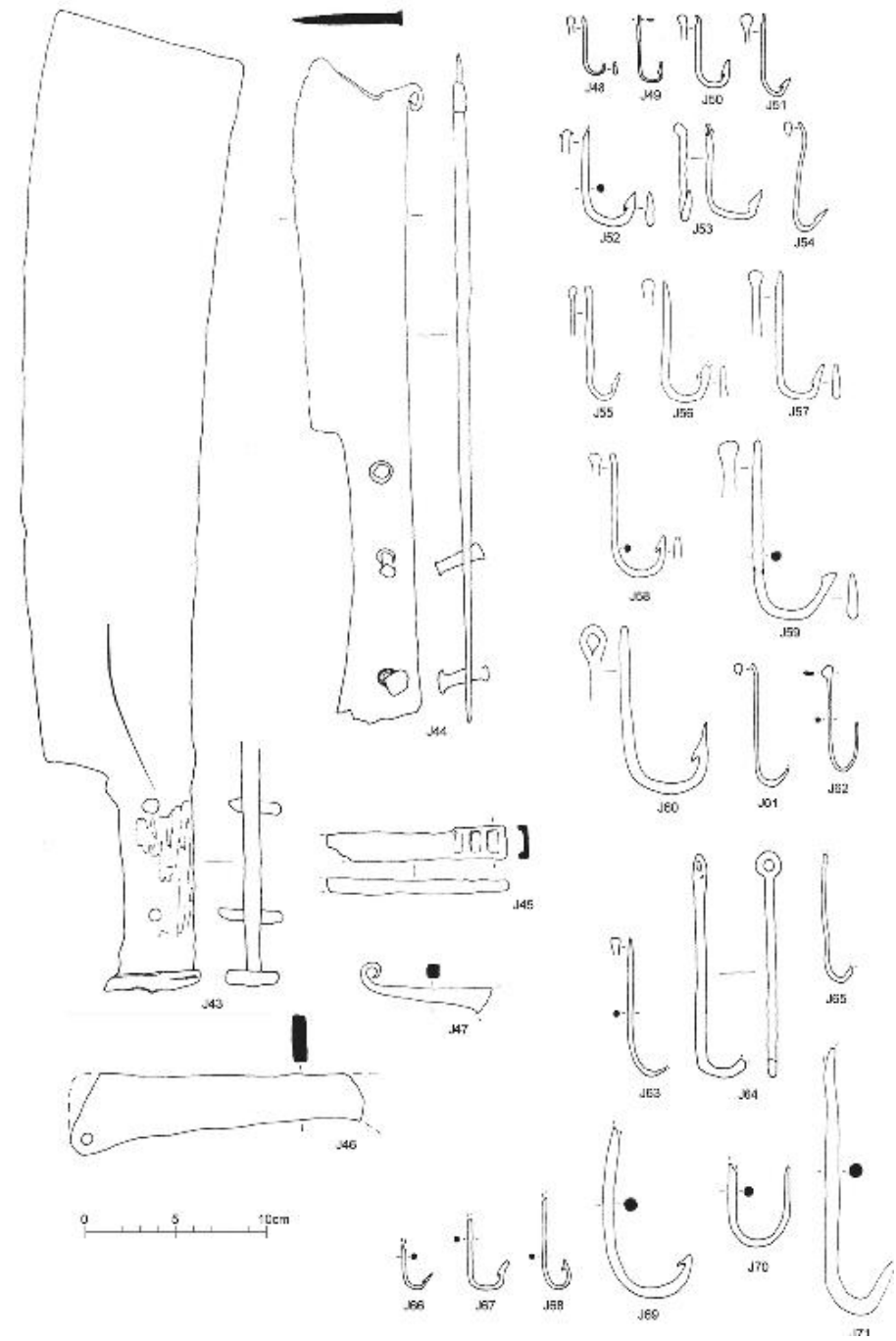



FIGURE 11.6
*Cleavers and fish hooks*

**J72 CANDLESTICK**
London.

13th century.
Pricket with single side scroll. L 110mm.
Museum of London. Former Guildhall
Museum 17760. From Austin Friars, pit 1012.

**J73 CANDLESTICK**
Waltham Abbey, Essex.
12th–13th century.
Pricket with side scrolls. Stem broken.
L 98mm.
Excavated by P J Huggins. From Church Street.

**J74 CANDLESTICK**
London.
Late 13th–mid 14th century.
Broken pricket with side scrolls. L 143mm.
Henig 1974, 191, fig 38.70.

**J75 CANDLESTICK**
London.
Late 13th to later 14th century.
Distorted pricket with side scroll. L 125mm.
Henig 1974, 191, fig 38.69.

**J76 CANDLESTICK**
Stonar, Kent.
*c*1275–1385.
Broken pricket with side scrolls, stem incomplete. L 110mm.
Excavated by N Macpherson-Grant.

**J77 CANDLESTICK**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Pricket broken, rest corroded. L 76mm.
Macdonald and Laing 1974–75, 149, fig 11.32.

**J78 CANDLESTICK**
London.
13th century to late medieval.
Pricket with side scrolls. Stem broken.
L 113mm.
Museum of London. Former Guildhall

Museum 24172. From Upper Thames Street.

**J79 CANDLESTICK**
Wharram Percy, North Yorkshire.
Early 15th century.
Pricket and side arms broken, side scrolls and stem complete. L 83mm.
Goodall 1979a, 118, fig 61.20.

**J80 CANDLESTICK**
London.
Around later 14th century.
Pricket with side scrolls and broken, angled stem. L 74mm.
Henig 1974, 191, fig 38.71.

**J81 CANDLESTICK**
Pleshey Castle, Essex.
Post-1140 or 1180 to late 12th or earlier 13th century.
Pricket and stem broken, side scrolls complete. L 41mm.
Goodall 1977c, 177, fig 39.34.

**J82 CANDLESTICK**
Winchester, Hampshire.
Early 13th century.
Three-legged base supports wax pan and distorted stem with knop moulding, shaped finial and two side prickets. Tinned.
L 299mm.
Goodall 1990-20, fig 306.3530.

**J83 CANDLESTICK**
Winchester, Hampshire.
Late 11th–12th century.
Socketed with straight stem. L 59mm.
Goodall 1990-20, fig 306.3531.

**J84 CANDLESTICK**
Goltho, Lincolnshire.
Early to mid 14th century.
Socketed with straight stem. L 74mm.
Goodall 1975a, 87, not illustrated but as 100.

**J85 CANDLESTICK**
Goltho, Lincolnshire.

Early to mid 14th century.
Socketed with straight stem. L 88mm.
Goodall 1975a, 87, fig 41.100.

**J86 CANDLESTICK**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.
Socketed, base of stem probably distorted.
L 105mm.
O'Neil 1944–45, 41, pl IX.11.

**J87 CANDLESTICK**
Seacourt, Oxfordshire.
Mid to late 12th to late 14th century.
Socketed with straight, spirally twisted stem.
L 172mm.
Biddle 1961–62, 177, fig 30.1, scale 1:4, not 1:3.

**J88 CANDLESTICK**
Newcastle-upon-Tyne, Tyne and Wear.
Probably late medieval.
Socketed with short straight stem. L 78mm.
Harbottle 1968, 220, fig 18.149.

**J89 CANDLESTICK**
Faxton, Northamptonshire.
Site: 12th–15th century.
Socketed with straight stem. L 121mm.
Excavated by L A S Butler.

**J90 CANDLESTICK**
Grafton Regis, Northamptonshire.
Probably 15th century.
Socket broken, straight stem. L 124mm.
Excavated by Miss C M Mahany.

**J91 CANDLESTICK**
London.
Late 15th–early 16th century.
Socketed with broken, straight stem.
L 97mm.
Excavated by F C Willmot. Site at 66

Foyle Road.

**J92 CANDLESTICK**
Lyveden, Northamptonshire.
1475–1500.
Socketed with broken, straight, spirally twisted stem. L 136mm.
Steane and Bryant 1975, 119, fig 45.15.

**J93 CANDLESTICK**
Wharram Percy, North Yorkshire.
Early 16th century to 20th century.
Socketed with gently curved, spirally twisted stem. L 130mm.
Goodall 1979a, 118, fig 61.22.

**J94 CANDLESTICK**
Wintringham, Cambridgeshire.
Mid 13th century.
Socketed with broken, angled stem. L 97mm.
Goodall 1977a, 258, fig 46.66.

**J95 CANDLESTICK**
Wintringham, Cambridgeshire.
Second half 13th century.
Socketed with broken, angled stem. L 74mm.
Goodall 1977a, 258, fig 46.68.

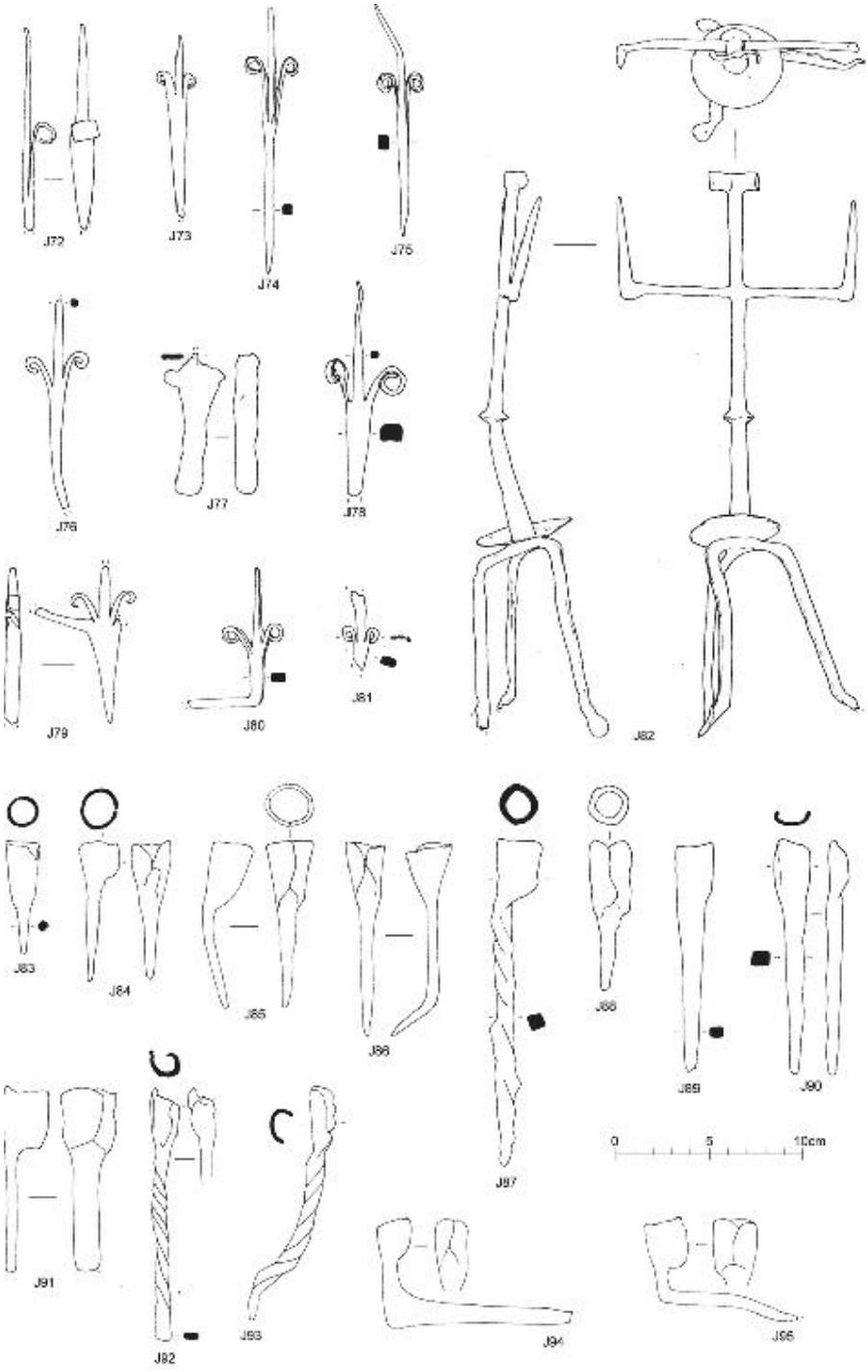



FIGURE 11.7
*Candlesticks*

**J96 CANDLESTICK**

Wintringham, Cambridgeshire.
Second half 13th century.
Socketed with angled stem. L 88mm.
Goodall 1977a, 258, fig 46.67.

**J97 CANDLESTICK**
Wintringham, Cambridgeshire.
Late 13th to early 14th century.
Socketed with broken, spirally twisted, angled arm. L 70mm.
Goodall 1977a, 258, fig 46.70.

**J98 CANDLESTICK**
London.
?Late 13th–14th century.
Socketed with side scroll on angled stem.
L 105mm.
Henig 1974, 191, fig 39.72.

**J99 CANDLESTICK**
Stonar, Kent.
*c*1275–1385.
Socketed with broken, angled stem. L 63mm.
Excavated by N Macpherson-Grant.

**J100 CANDLESTICK**
Wintringham, Cambridgeshire.
Around early 14th century.
Socketed with broken, angled stem. L 79mm.
Goodall 1977a, 258, fig 46.71.

**J101 CANDLESTICK**
Goltho, Lincolnshire.
Croft B: late Saxon to mid 14th century.
Socketed with broken, angled stem. L 52mm.
Goodall 1975a, 87, fig 41.102.

**J102 CANDLESTICK**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Socketed with broken, angled stem. L 76mm.
Macdonald and Laing 1974–75, 148, fig 11.20.

**J103 CANDLESTICK**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th cent ur y.
Socketed with broken, angled stem. L 79mm.
Goodall 1975a, 87, fig 41.101.

**J104 CANDLESTICK**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th, early 15th century.
Socketed with angled stem of spirally twisted iron. L 98mm.
Goodall 1975a, 87, fig 41.103.

**J105 CANDLESTICK**
Grenstein, Norfolk.
Late 14th–15th century.
Socketed with broken, angled stem. L 75mm.
Goodall 1980c, fig 81, no. 68.

**J106 CANDLESTICK**
Grenstein, Norfolk.
Late 14th–15th century.
Socketed with angled stem. L 77mm.
Goodall 1980c, fig 81, no. 69.

**J107 CANDLESTICK**
Wharram Percy, North Yorkshire.
Early 15th century.
Socketed with broken, angled stem. L 56mm.
Goodall 1979a, 118, fig 61.21.

**J108 CANDLESTICK**
Kilton Castle, Cleveland.
Late 15th century.
Socketed with angled stem. L 94mm.
Excavated by A Aberg.

**J109 CANDLESTICK**
Northampton.
Later 15th century.
Socketed with angled stem. L 108mm.
Goodall *et al* 1979, 273, fig 119.84.

**J110 CANDLESTICK**
Winchester, Hampshire.
15th century.
Socketed with broken, angled stem. L 68mm.
Goodall 1990-20, fig 306.3534.

**J111 CANDLESTICK**
Writtle, Essex.
*c*1425–1521.
Socketed with angled stem. L 74mm.
Rahtz 1969b, 85, fig 47.55.

**J112 CANDLESTICK**
Cambokeels, Durham.
Site: later 14th to early 16th century.
Socketed with broken, angled stem. L 80mm.
Hildyard 1949, 199, fig 6.3.

**J113 CANDLESTICK**
Rhuddlan, Clwyd.
1280s.
Socketed with broken, cranked stem.
L 52mm.
Goodall 1994, fig 17.4, no. 73.

**J114 CANDLESTICK**
Oxford.
*c*1325–*c*1400.
Socketed with cranked, incomplete stem.
L 53mm.
Goodall 1977e, 146, fig 27.43.

**J115 CANDLESTICK**
Winchester, Hampshire.
14th century.
Socketed with cranked stem. L 119mm.
Goodall 1990-20, fig 306.3532.

**J116 CANDLESTICK**
Goltho, Lincolnshire.
Croft B: late Saxon to mid 14th century.
Rectangular wax-pan with corner spout and central hole. L 69mm.

Goodall 1975a, 87, fig 41.105.

**J117 CANDLESTICK**
Oxford.
14th–early 15th century.
Rectangular wax-pan with broken handle and central candle socket. L 86mm.
Excavated by N Palmer.

**J118 CANDLESTICK**
Grenstein, Norfolk.
Late 14th–15th century.
Rectangular wax-pan with common rivet through handle and candle socket. L 158mm.
Goodall 1980c, fig 81, no. 73.

**J119 CANDLESTICK**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Pricket and socket spring from single, broken stem. L 117mm.
Goodall 2002, fig 7.6, no. 68.

**J120 CANDLESTICK**
Rhuddlan, Clwyd.
14th century,?earlier part, or conceivably 1290–1300.
Pricket and socket set on broken, angled stem. H 89mm.
Goodall 1994, fig 17.4, no. 74.

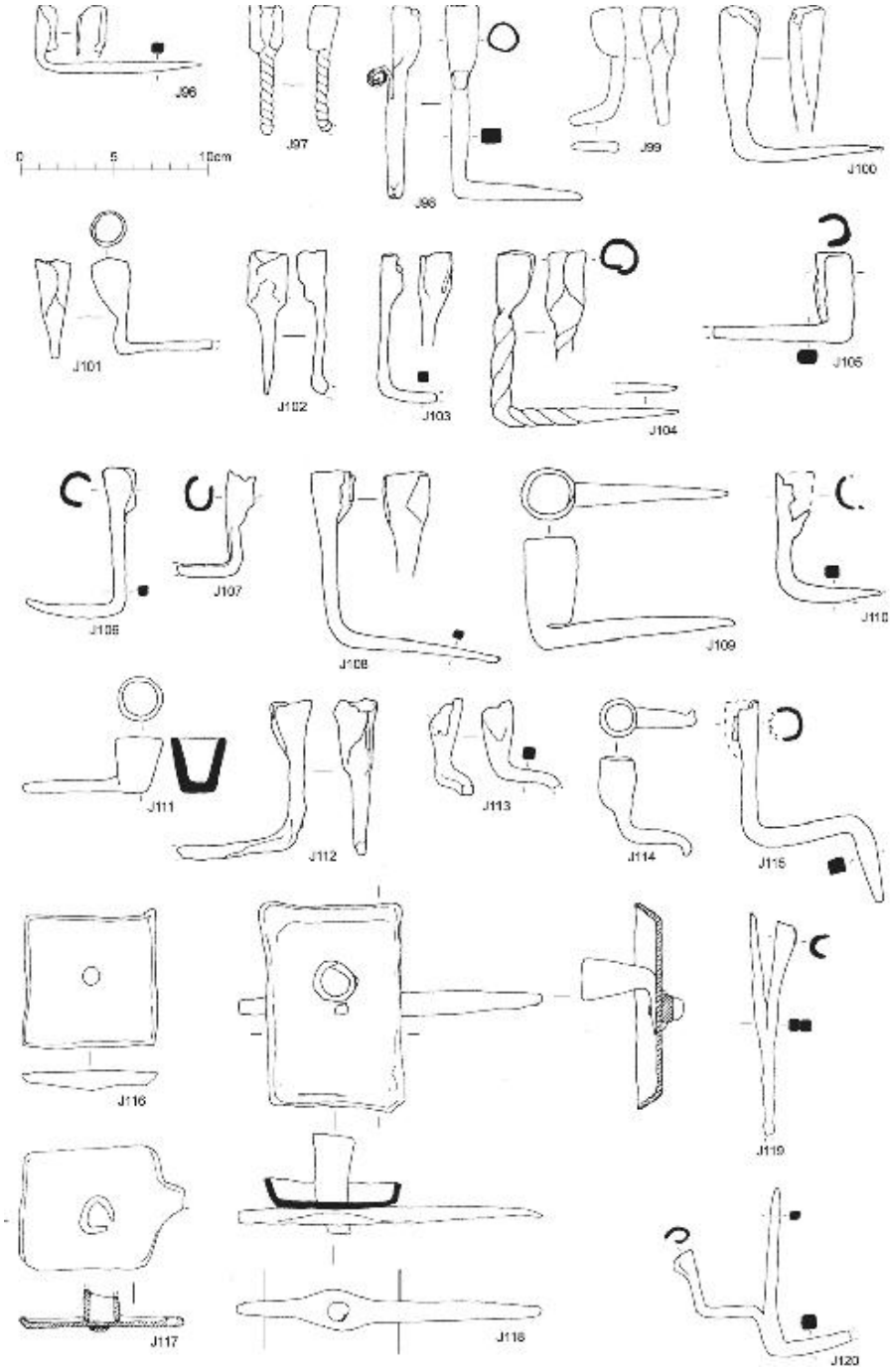



FIGURE 11.8
*Candlesticks*

**J121 CANDLESTICK**
South Witham, Lincolnshire.

1137–85 to *c*1220.
Three-armed candlestick with socketed side arms and broken central pricket and stem.
L 132mm.
Goodall 2002, fig 7.6, no. 71.

**J122 CANDLESTICK**
South Witham, Lincolnshire.
*c*1220–late 13th century.
Three-armed candlestick with one of two socketed side arms broken, broken central pricket and stem. L 129mm.
Goodall 2002, fig 7.6, no. 73.

**J123 CANDLESTICK**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Broken socketed side arm from three-armed candlestick. L 60mm.
Goodall 2002, fig 7.6, no. 72.

**J124 CANDLESTICK**
Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Broken socketed side arm from three-armed candlestick. L 37mm.
Goodall 1975a, 87, fig 41.104.

**J125 CANDLESTICK**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
Three-armed candlestick with socketed side arms, one broken, central pricket, broken stem. L 115mm.
DAMHB Collection, London.

**J126 CANDLESTICK**
Rievaulx Abbey, North Yorkshire.
Site: 1131–1538 with later robbing.
Three-armed candlestick with side arms with split ends, broken central arm and stem.
L 102mm.
DAMHB Collection, London.

**J127 CANDLESTICK**
Rievaulx Abbey, North Yorkshire.

Site: 1131–1538 with later robbing.
Three-armed candlestick with side arms with split ends, broken central arm and stem.
L 105mm.
DAMHB Collection, London.

**J128 CANDLESTICK**
London.
Late 15th or early 16th century.
Three-armed candlestick with socketed side arms, central pricket and broken stem.
L 114mm.
Hammerson 1975, 242, fig 19.5.

**J129 FIRE-STEEL**
Winchester, Hampshire.
Mid to late 11th century.
Rectangular blade with hooked tip and perforated inner end. L 98mm.
Goodall 1990-20, fig 306.3538.

**J130 FIRE-STEEL**
Winchester, Hampshire.
Mid 12th century.
Rectangular blade with hooked tip and broken, perforated inner end. L 103mm.
Goodall 1990-20, fig 306.3539.

**J131 FIRE-STEEL**
Brooklands, Weybridge, Surrey.
*c*1150–1325.
Blade and handle broken. L 71mm.
Goodall 1977d, 73, fig 45.17.

**J132 FIRE-STEEL**
Pleshey Castle, Essex.
Post 1180 to mid 13th, early 14th century.
Blade broken. L 68mm.
Goodall 1977c, 176, fig 38.13.

**J133 FIRE-STEEL**
Thelsford Priory, Warwickshire.
Site: 1200–1212 to 1536.

Shank broken. L 71mm.
Excavated by Mrs M Gray.

**J134 FIRE-STEEL**
Loughor Castle, West Glamorgan.
Site: *c*1106 to late 13th century.
Open rectangular fire-steel, the long sides convex. L 83mm.
Excavated by J M Lewis.

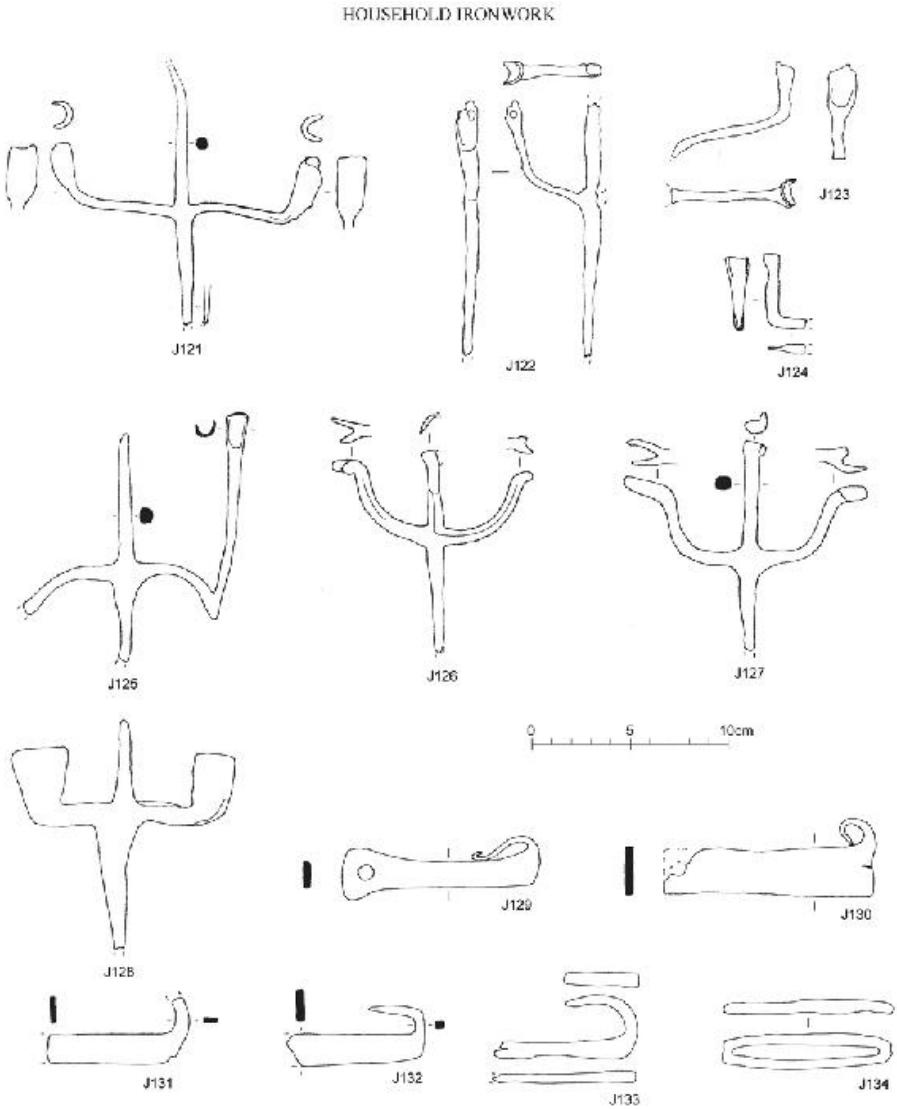



FIGURE 11.9
*Candlesticks and fire-steels*

**J135 BUCKET**

Taunton Castle, Taunton, Somerset.

*c*1150. From well.

Stave-built wooden bucket bound by two iron hoops, about one quarter of which survives. No handle found. Bucket diameter at rim: 334mm. Mean internal diameters of iron hoops: 328mm and 294mm.

Gray 1930; 1941, 68; Dunning 1974, 103– 104, fig 12.

**J136 BUCKET**

Duffield Castle, Derbyshire.

Keep 1177–90 to 1266. From well.

Stave-built wooden bucket found by two iron hoops which survived in a fragmentary state.

Iron handle rides in U-shaped handle loops nailed to inside of bucket. Bucket diameter at rim: 303mm. Handle W 303mm. Handle loop W 67mm.

Cox 1887, 160–161, fig on page 161; Dunning 1974, 104–105, fig 13.

**J137 BUCKET**

Castell-y-Bere, Gwynedd.

From well fill of 1283–95.

Stave-built wooden bucket originally boud by withies. Iron handle rides in eyed straps nailed to insides of opposing tall staves.

Bucket diameter at rim: 356mm. Handle W 382mm. Eyed straps L 200mm.

Butler 1974, 100–101, figs 10–11, pl XXIV.

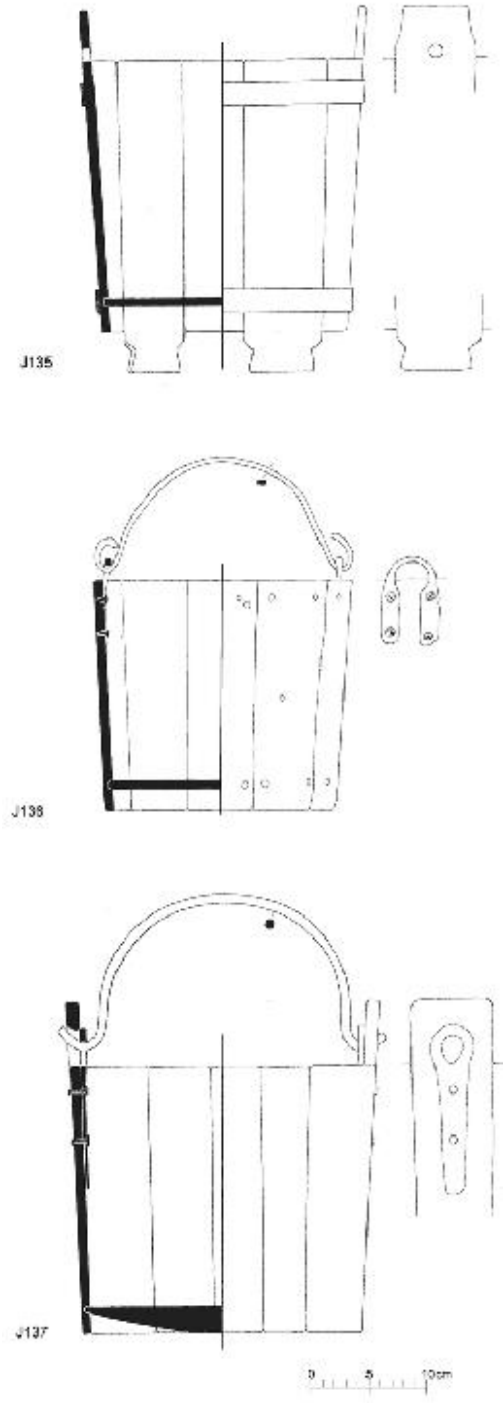



FIGURE 11.10
*Buckets*

**J138 BUCKET** (not illustrated)
Weoley Castle, Birmingham, West Midlands.
*c*1270–1600. From well.
Stave-built wooden bucket bound by two iron hoops. Iron handle with central expansion carrying swivel hook and chain **J239** of three figure-eight links rides in holes in opposing tall staves. Bucket diameter at rim: 340mm.
Taylor 1974. For site see Oswald 1962.

**J139 BUCKET**
Kilton Castle, Cleveland.
Late 15th century. From well.
Stave-built wooden bucket bound by two iron hoops. Iron handle with central expansion around corroded swivel loop rides in U-shaped handle loops (one lost) nailed to insides of opposing tall staves. Bucket not restored or conserved when examined. Handle width approximately 463mm. Three links **J237** from chain found with bucket.
Excavated by A Aberg.

**J140 BUCKET HOOP**
Winchester, Hampshire.
?Mid 14th century.
Incomplete, canted hoop. External D 209mm.
Goodall 1990-18, fig 300.3435.

**J141 BUCKET HOOP**
Oxford.
*c*1400 –*c*1550.
Near complete canted hoop, distorted diameter 40mm.
Goodall 1977e, 142, fig 26.31.

**J142 BUCKET HOOP**
Waltham Abbey, Essex.
15th–16th century. From well.
Complete circular hoop of canted, rectangular section with vertical wood graining from staves on inner side. Mean internal diameter 250mm.
Goodall 1973a, 173, fig 12.45.

**J143 BUCKET HOOP** (not illustrated)
Waltham Abbey, Essex.
15th–16th century. From well.
Complete hoop of canted section. Mean internal diameter 230mm.

Goodall 1973a, 173, 45 (unillustrated example).

**J144 HANDLE LOOP**
Newbury, Berkshire.
Mid 15th century. From well.
U-shaped handle loop, straps incomplete.
L 106mm.
Goodall 1997, fig 21, no. 34.

**J145 HANDLE LOOP**
Newbury, Berkshire.
Mid 15th century. From well.
U-shaped handle loop. L 110mm.
Goodall 1997, fig 21, no. 33.

**J146 HANDLE LOOP**
Newbury, Berkshire.
Mid 15th century.
U-shaped handle loop, incomplete. L 79mm.
Goodall 1997, fig 21, no. 35.

**J147 HANDLE LOOP**
Waltham Abbey, Essex.
1500–70.
U-shaped handle loop, side straps broken.
L 126mm.
Goodall 1978d, 158, fig 22.15.

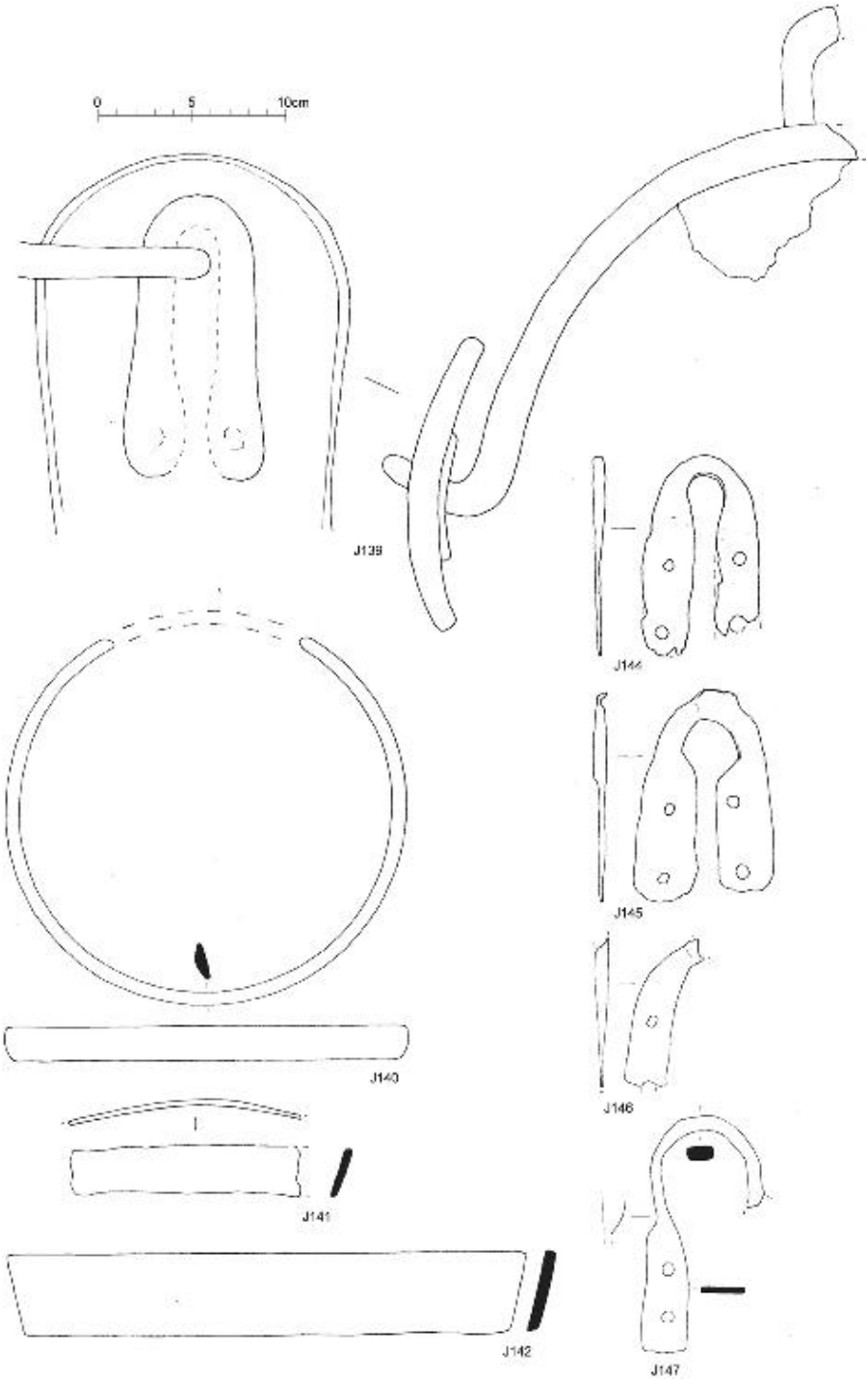



FIGURE 11.11
*Bucket, bucket hoops and handle loops*

**J148 HANDLE STRAP**
Llantwit Major, South Glamorgan.
12th to early 16th century.
Eyed strap, damaged. L 130mm.
Nash-Williams 1952, 331, pl X1(2).9.

**J149 HANDLE STRAP**
Ospringe, Kent.
*c*1483–1550.
Eyed handle strap. L 181mm.
Goodall 1979c, 132, fig 21.66.

**J150 HANDLE STRAP**
Newbury, Berkshire.
Mid 15th century. From well.
Eyed strap, broken. L 52mm.
Goodall 1997, fig 21, no. 38.

**J151 HANDLE STRAP**
Newbury, Berkshire.
Mid 15th century. From well.
Eyed strap, base incomplete. L 117mm.
Goodall 1997, fig 21, no. 37.

**J152 HANDLE STRAP**
Waltham Abbey, Essex.
From well dug; *c*1300, filled late 15th to early 16th century.
Eyed handle strap, broken. L 75mm.
Goodall 1973a, 173, fig 12.46.

**J153 HANDLE STRAP**
Newbury, Berkshire.
*c*1430 –70.
Eyed handle strap. L 176mm.
Goodall 1997.

**J154 HANDLE STRAP**
Pivington, Kent.
Early 16th century.
Eyed handle strap. L 107mm.
Rigold 1962, 46, fig 8ii.

**J155 HANDLE**
Gloucester.
12th century.
Complete handle, flattened at the centre.
W 340mm.
Excavated by H Hurst.

**J156 HANDLE**
Rhuddlan, Clwyd.
?Mid 13th century, or late 11th–12th century.
o ne end broken. W 287mm.
Goodall 1994, fig 17.4, no. 75.

**J157 HANDLE**
Llanstephan Castle, Dyfed.
Site: 12th–15th century. From well.
Broken handle with central expansion with swivel hook. W 319mm.
DAMHB Collection, Cardiff.

**J158 HANDLE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Handle, flattened and expanded at the centre.
Found near part of what may have been a bucket or bucket hoop. W 169mm.
O'Neil 1944–45, 41, pl IX.17.

**J159 HANDLE**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Broken handle. W 42mm.
Goodall 1987, fig 159.120.

**J160 HANDLE**
Winchester, Hampshire.
14th century.
Broken handle. W 39mm.
Goodall 1990-18, fig 300.3431.

**J161 HANDLE**
Winchester, Hampshire.
14th century.

Distorted, spirally twisted handle. W 242mm.
Goodall 1990-19, fig 304.3518.

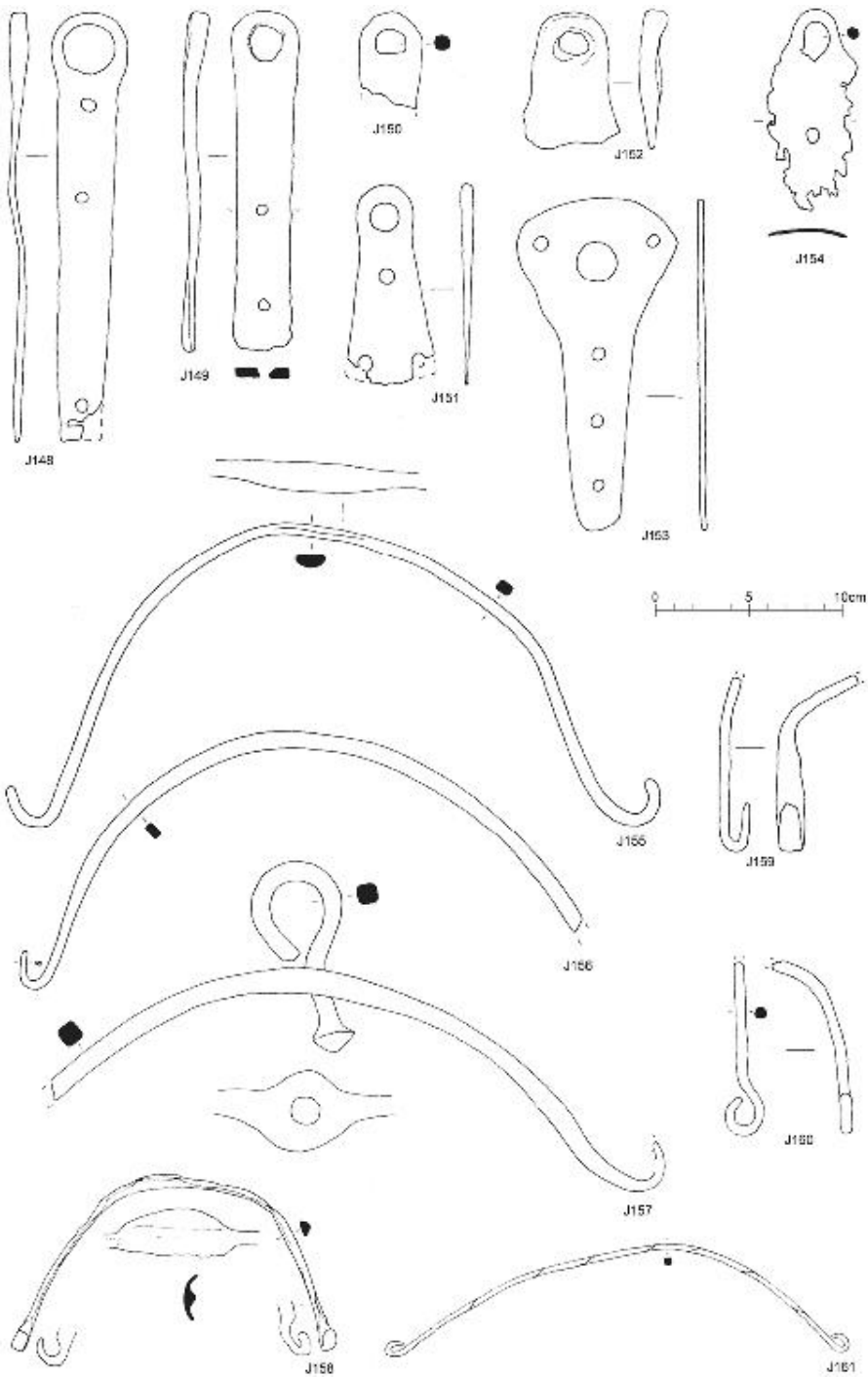



FIGURE 11.12

**J162 HANDLE** (not illustrated)
Winchester, Hampshire.
14th century.
Handle of spirally twisted iron with hooked ends, one broken. W 152mm. Compare with **J161**.
Goodall 1990-19, 978, no. 3519.

**J163 HOOK**
South Witham, Lincolnshire.
1137–85 to *c*1220.
S-hook. L 103mm.
Goodall 2002, fig 7.5, no. 62.

**J164 HOOK**
The Mount, Princes Risborough, Buckinghamshire. 14th, early 15th century.
S-hook. L 138mm.
Pavry and Knocker 1953–60, 163, fig 13.8.

**J165 HOOK**
The Mount, Princes Risborough, Buckinghamshire. 14th, early 15th century.
S-hook. L 178mm.
Pavry and Knocker 1953–60, 163, fig 13.7.

**J166 HOOK**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080 –1600.
S-hook. L 287mm.
Birmingham City Museum, WC 434. For site see Oswald 1962.

**J167 HOOK**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080 –*c*1600.
S-hook. L 288mm.
Birmingham City Museum. For site see Oswald 1962.

**J168 HOOK**
Manor of the More, Rickmansworth, Hertfordshire. *c*1350–1426.
Hook with flattened, looped handle.
L 110mm.

Biddle *et al* 1959, 185, fig 20.5.

**J169 HOOK**
Waltham Abbey, Essex.
*c*1300. From well.
Incomplete hook with socket and strap extension, both formerly nailed. L 212mm.
Goodall 1973a, 173, fig 12.47.

**J170 HOOK**
Thelsford Priory, Warwickshire.
13th–14th, possibly 15th century.
Socketed hook. L 307mm.
Excavated by Mrs M Gray.

**J171 HOOK**
Hambleton Moat, Lincolnshire.
Site: 1250–1400.
Hook with broken stem. L 165mm.
Butler 1963, 67, fig 14.7.

**J172 HOOK**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Hook with nailed, flanged arm. L 178mm.
Goodall 1988, fig 81.94; Borenius and Charlton 1936.

**J173 HOOK**
Norwich.
In 1507 fire deposit.
Hook with socket and nailed extension strap.
L 231mm.
Goodall 1993a, fig 54.557.

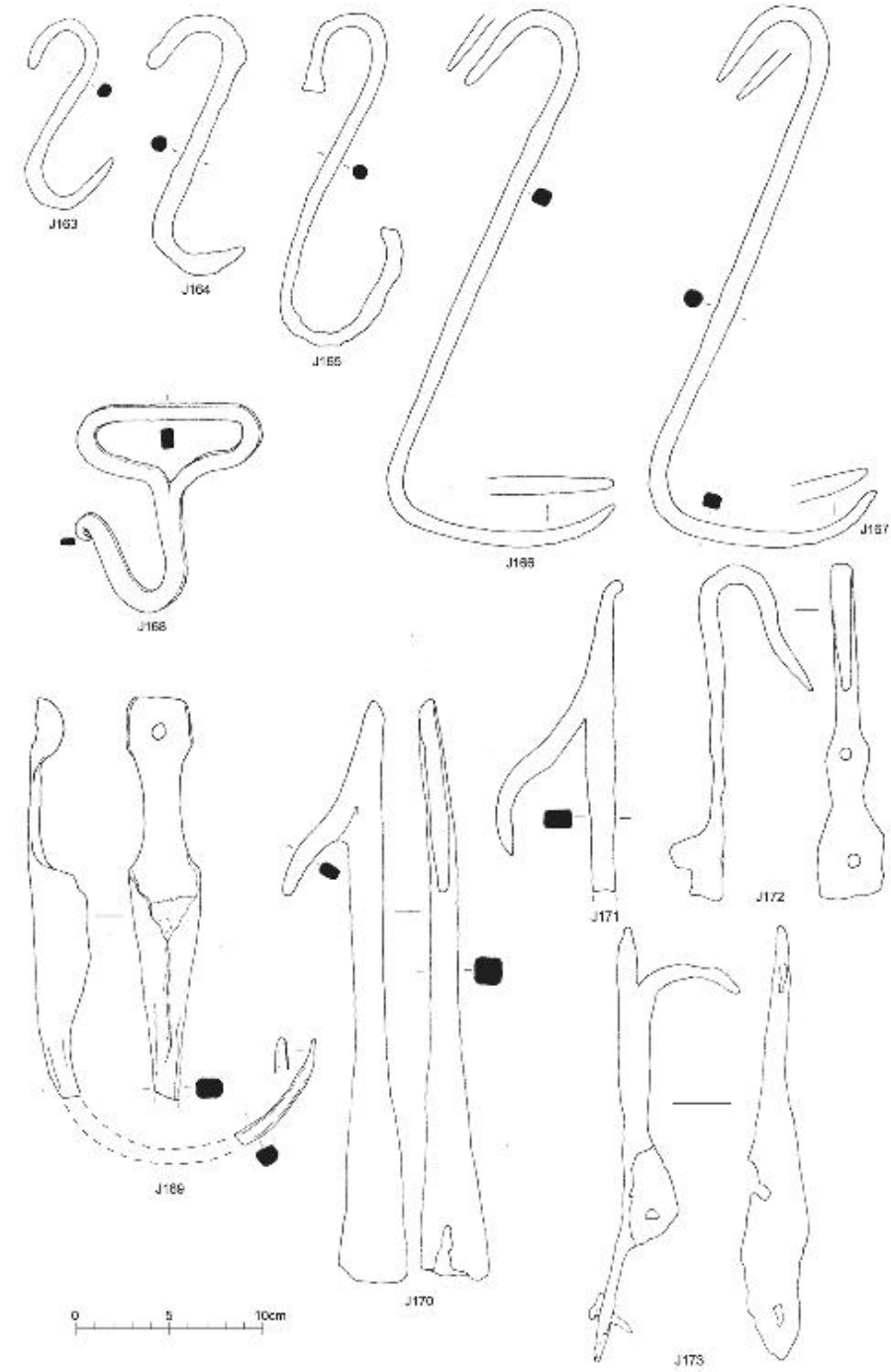



FIGURE 11.13
*Hooks*

**J174 DRAGHOOK** (not illustrated)

Weoley Castle, Birmingham, West Midlands.
Site *c*1080 –1600.
Eyed shank with loop and four outward curving arms each terminating in four back-facing barbs. Larger central arm (length not known).
Birmingham City Museum, WC 368.

**J175 HOOK**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080 –1600.
Closed loop, flattened hooked end.
L 390mm.
Birmingham City Museum, WC 435. For site see Oswald 1962.

**J176 HOOK**
Wisley, Surrey.
12th–13th century.
Two hooked arms and tang. L 95mm.
Excavated by Mrs A Watson.

**J177 HOOK**
Winchester, Hampshire.
Mid to?late 13th century.
Two hooked arms broken, tang complete.
L 66mm.
Goodall 1990-14, fig 242.2549.

**J178 HOOK** (not illustrated)
Winchester, Hampshire.
14th–?15th century.
Two hooked arms broken, tang complete. As **J177**. L 45mm.
Goodall 1990-14, 820, no. 2552.

**J179 HOOK**
Winchester, Hampshire.
Mid to late 13th century.
Two hooked arms, one broken. Tang tip damaged. L 47mm.
Goodall 1990-14, fig 242.2550.

**J180 BALANCE**
Oxford.
14th–18th century.
Equal-armed balance retaining one eyed terminal, stub of central upright

pointer, and pivoting suspension stirrup. L 256mm.
Goodall 1976c, 300, fig 28.89.

**J181 BALANCE**
Copt Hay, Tetsworth, Oxfordshire.
Late 13th–14th century.
Equal-armed balance with near-complete beam and central U-shaped mount supporting broken ring. L 328mm.
Robinson 1973, 106, fig 25.23.

**J182 BALANCE**
Copt Hay, Tetsworth, Oxfordshire.
Mid 13th century.
Arm tip from equal-armed balance. Length unknown.
Robinson 1973, 106, fig 25.24.

**J183 BALANCE**
Theodoric's Hermitage, Margam, West Glamorgan.
Site: 13th–15th century.
Stirrup from equal-armed balance.
H 143mm.
National Museum of Wales, Cardiff, 49.140.21.

**J184 BALANCE**
Huish, Wiltshire.
Site: 12th–15th century.
Unequal-armed balance with wooden beam, iron fittings and latten weight. The beam, almost entirely lost, has a 98mm long, 8mm diameter sheet iron sleeve at one end. Two fulchrums and the bar for the load pass through the sleeve and wood, and are held firm at their outer ends by rectangular plates with out-turned ends. U-shaped loops from the fulchrums support suspension rings, and from the load bar support a swivel ring and looped hook with chisel-cut decoration. An iron swivel hook supports the weight at the opposing end, which is of latten filled with lead.
Shortt 1968.

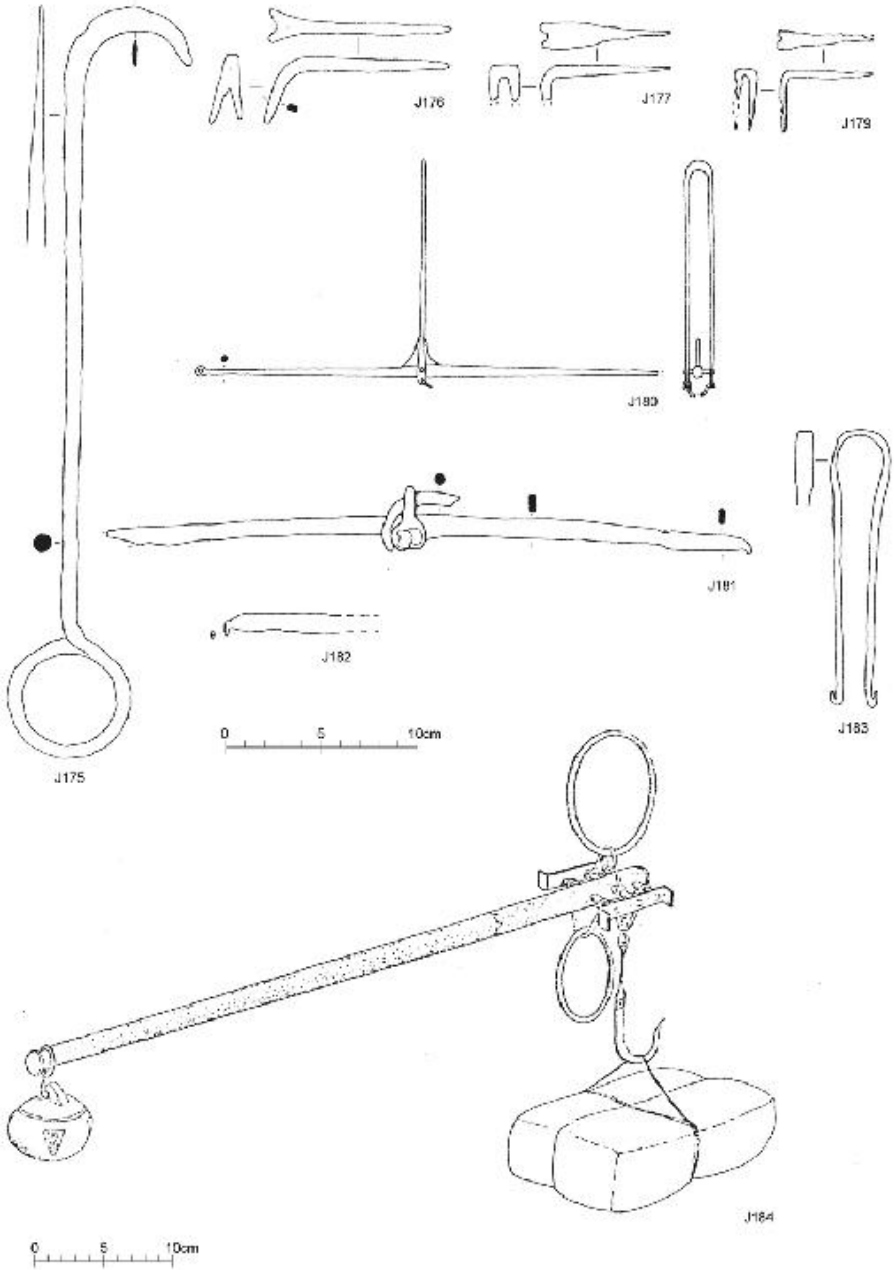



FIGURE 11.14
*Hooks and balances*

**J185 CHAIN**
Gomeldon, Wiltshire.
Second half 13th century.

Chain of several circular lings, 12mm diameter, L 41mm.
Excavated by J W G Musty.

**J186 RING**
Tarring, West Sussex.
*c*1490–1510. From well with shoe leather.
Ring with fragment of leather strap from shoe. D:12mm.
Barton 1963, 34, fig 4.12.

**J187 RING**
Wallingstones, Hereford and Worcester.
First half 13th century.
D 12mm.
Bridgewater 1970–72, 102, no. 16.

**J188 RING**
Winchester, Hampshire.
12th–early 13th century.
Distorted. D 13mm.
Goodall 1990-12, fig 140.1325.

**J189 RING**
Hangleton, West Sussex.
13th–14th century.
D 14mm.
Holden 1963, 171, fig 37.5.

**J190 RING**
Kings Langley, Hertfordshire.
15th century.
D 15mm.
Neal 1973, 56, fig XV.76.

**J191 RING**
Northampton.
Later 15th century.
Broken ring with non-ferrous plating. D 17mm.
Goodall *et al* 1979, 273, fig 120.92.

**J192 RING**
Castle Acre Castle, Norfolk.
1140s–50s with derived material from c1066.

D 20mm.
Goodall 1982, fig 41, no. 119.

**J193–194 RINGS**
Stockbridge Down, Hampshire.
Late 11th century. Found with buckle **K2** near skeleton in position suggesting they were attached one in front and one on either side of a belt.
Two rings, one broken. D 33 and 30mm.
Hill 1935–37, 250, pl 1.

**J195 RING**
Goltho Manor, Lincolnshire.
*c*1100–50.
D 39mm.
Goodall 1987, fig 159.126.

**J196 RING**
Brandon Castle, Warwickshire.
13th century.
Overlapped ends, part-twisted circumference.
D 46mm.
Chatwin 1955, 81, fig 11.24.

**J197 LINK**
Thuxton, Norfolk.
Site: 12th–14th century.
Rectangular link. W 23mm.
Excavated by L A S Butler.

**J198 LINK**
Castle Acre Castle, Norfolk.
1140s deposits with derived material from *c*1066.
Broken rectangular link. W 24mm.
Goodall 1982, fig 41, no. 115.

**J199 LINK**
Grafton Regis, Northamptonshire.
Probably 15th century.
Rectangular link. W 26mm.
Excavated by Miss C Mahany.

**J200 LINK**
Goltho Manor, Lincolnshire.
*c*1100–30.
Rectangular link. W 30mm.
Goodall 1987, fig 159.141.

**J201 LINK** (not illustrated)
Winchester, Hampshire.
Mid to late 13th century.
Distorted oval link. L 39mm.
Goodall 1990-15, 824, no. 2557.

**J202 LINK**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Broken oval link. L 68mm.
Goodall 2002, fig 7.5, no. 58.

**J203 CHAIN**
Winchester, Hampshire.
13th century.
Oval flat link and ring. L 73mm.
Goodall 1990-15, fig 245.2558.

**J204 CHAIN**
Alsted, Surrey.
*c*1270–1350.
Two oval links, one broken and distorted.
L 133mm.
Goodall 1976a, 56, fig 34.20.

**J205 CHAIN**
Cambokeels, Durham.
Later 14th to early 15th century.
Fifteen straight-sided links, some distorted.
Length of four links. 138mm.
Hildyard and Charlton 1947, 194, fig 3.3.

**J206 CHAIN**
Winchester, Hampshire.
14th–15th century.
Circular flat ring and straight-sided link.

L 65mm.
Goodall 1990-15, fig 245.2563.

**J207 CHAIN**
Winchester, Hampshire.
15th–16th century.
Circular flat ring and straight-sided link.
L 60mm.
Goodall 1990-15, fig 245.2564.

**J208 CHAIN**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Ring and two straight-sided links. L 133mm.
Goodall 1988, fig 81.95; Borenius and Charlton 1936.

**J209 CHAIN WITH SWIVEL RING**
Wintringham, Cambridgeshire.
Late 13th–early 14th century.
Two flat straight-sided links with swivel hook and ring. L 175mm.
Goodall 1977a, 257, fig 45.56.

**J210 CHAIN WITH SWIVEL RING**
Northolt Manor, Greater London.
1300–50. Found near hearth.
Fragments of chain of straight-sided links and swivel ring and hook. Swivel L 50mm.
Hurst 1961, 289, fig 76.9–12.

**J211 CHAIN**
Hen Blas, Clwyd.
13th–14th century.
Five flat straight-sided links, two drawn.
L 122mm.
Leach 1960, 23, fig 13.18.

**J212 LINK**
Newbury, Berkshire.
c1430 –70.
Straight-sided link, worn one end, broken at the other. L 89mm.
Goodall 1997, fig 21, no. 39.

**J213 LINK**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Broken straight-sided link. L 110mm.
Goodall 2002, fig 7.5, no. 59.

**J214 CHAIN WITH SWIVEL LOOP**
Winchester, Hampshire.
Late 13th century.
Chain of two straight-sided links, the lower supporting a swivel loop. L 465mm.
Cunliffe 1964, 157, fig 54.5, scale incorrect.

**J215 CHAIN AND RING**
Northolt Manor, Greater London.
1300–50. From hearth in cooking area.
Chain and copper-alloy ring, with large bottom ring. Iron links pivoting on a common bar.
L 183mm.
Hurst 1961, 289, fig 76.17.

**J216 CHAIN AND HOOK**
London.
?Late 13th–mid 14th century.
Three flat figure-eight links and looped hook.
L 125mm.
Henig 1974, 191, fig 38.66.

**J217 CHAIN AND HOOK**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Broken flat, figure-eight link and looped hook.
L 52mm.
Goodall 1977f, 47, iron object fig 2.35.

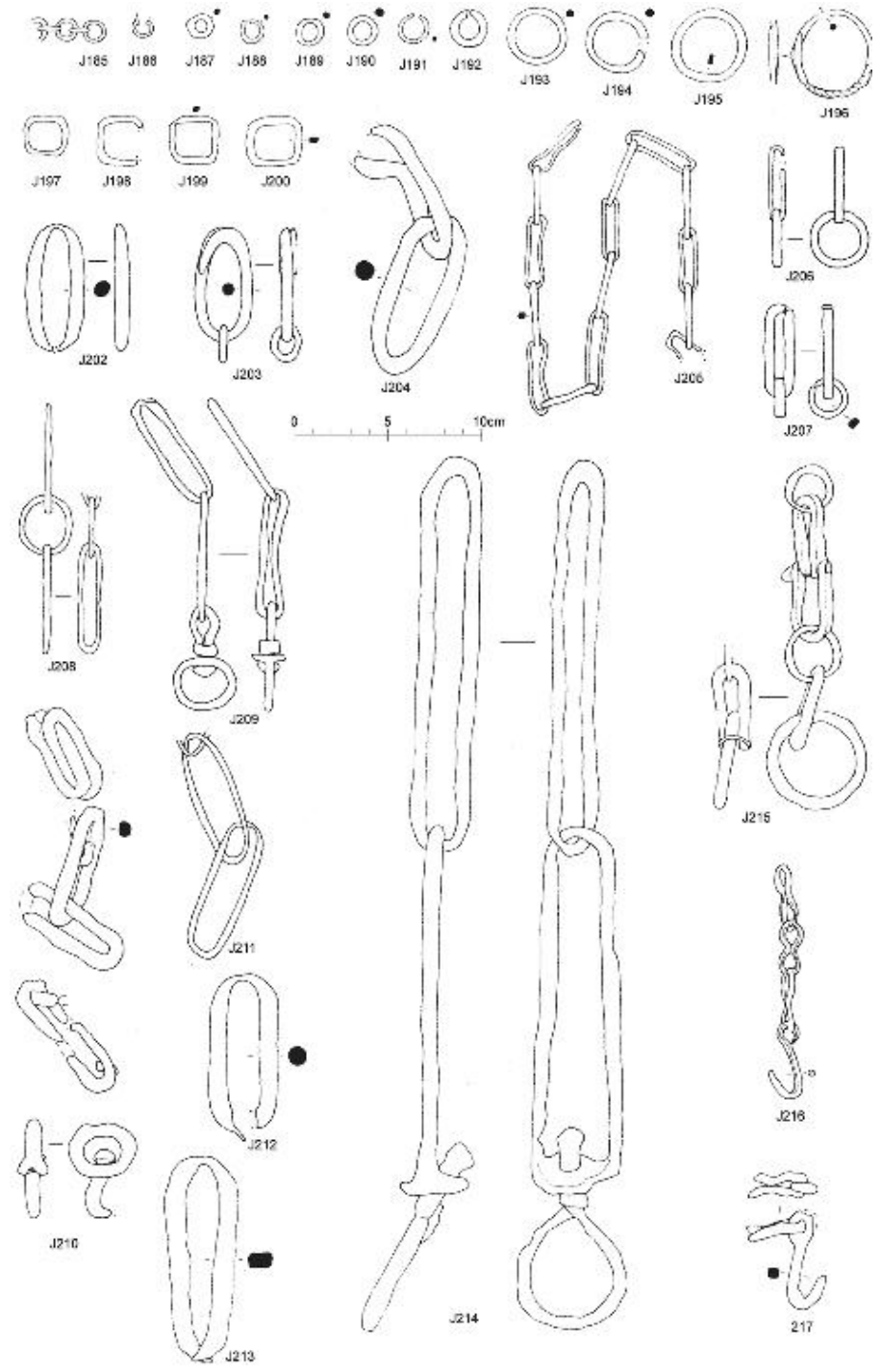



FIGURE 11.15
*Chains, rings, and links*

**J218 CHAIN**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Three flat figure-eight links. L 102mm.
Goodall 2002, fig 7.5, no. 56.

**J219 CHAIN**
Winchester, Hampshire.
14th–?15th century.
Two flat, figure-eight links, one broken
L 47mm.
Goodall 1990-15, fig 245.2571.

**J220 CHAIN AND HOOK**
Dyserth Castle, Clwyd.
Site: 1241–63.
Three flat figure-eight links and looped hook
L 145mm.
Glenn 1915, 65, fig 10.

**J221 LINK**
Norwich.
13th century.
Flat figure-eight link. L 51mm.
Hurst 1963, 168, fig 14.3.

**J222 CHAIN**
Northampton.
?Second half 13th century.
Two flat figure-eight links. L 83mm.
Goodall 1978c, 152, fig 24.3.

**J223 LINK**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080 –1600.
Broken, tinned, flat figure-eight link
L 58mm.
Birmingham City Museum, WC 329. For site see Oswald 1962.

**J224 CHAIN**
Winchester, Hampshire.
Late 11th–early 12th century.

Two figure-eight links, one flat, one twisted
L 103mm.
Goodall 1990-15, fig 245.2567.

**J225 LINK**
Oxford.
*c*1250–*c*1325.
Flat, figure-eight link. L 68mm.
Goodall 1977e, 142, fig 26.28.

**J226 CHAIN AND HOOK**
Portchester, Hampshire.
13th century.
Chain of figure-eight links and hook
L 126mm.
Hinton 1977, 204, fig 109.70, scale 2:3 not 1:3.

**J227 CHAIN**
Clough Castle, Co. Down.
*c*1250–early 14th century.
Two broken flat figure-eight shaped links one with collar. L 61mm.
Waterman 1954, 141, fig 13.3.

**J228 LINK**
Winchester, Hampshire.
12th–?13th century.
Broken flat, figure-eight link. L 66mm.
Goodall 1990-15, fig 245.2568.

**J229 CHAIN**
Glastonbury Tor, Somerset.
12th–16th century.
Four flat figure-eight links. L 155mm.
Rahtz 1970, 53, fig 23.14.

**J230 LINK**
Writtle, Essex.
1211–*c*1306.
Flat figure-eight link. L 113mm.
Rahtz 1969b, 87, fig 48.78.

**J231 LINK**

Wintringham, Cambridgeshire.
Second half 13th century.
Flat figure-eight link. L 116mm.
Goodall 1977a, 257, fig 45.57.

**J232 LINK**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Broken flat rectangular link. L 123mm.
Goodall 2002, fig 7.5, no. 57.

**J233 LINK AND STAPLE**
Winchester, Hampshire.
Late 13th–early 14th century.
Curved figure-eight link and U-shaped staple. Link L 109mm, staple W 18mm, L 35mm.
Goodall 1990-19, fig 303.3482.

**J234 CHAIN**
Waltham Abbey, Essex.
*c*1540.
Two flat figure-eight links. L 125mm.
Huggins 1972, 124. From F64.

**J235 LINK**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Broken figure-eight link. L 142mm.
Macdonald and Laing 1974–75, 148, fig 11.23.

**J236 CHAIN**
Hangleton, West Sussex.
13th–14th century.
Two flat figure-eight links. L 224mm.
Holden 1963, 169–171, fig 37.1.

**J237 CHAIN**
Kilton Castle, Cleveland.
Late 15th century.
Three flat figure-eight links found in well with bucket **J139**. L 305mm.
Excavated by A Aberg.

**J238 LINK**
Brandon Castle, Warwickshire.
13th century,?post-1226.
Flat figure-eight link. L 173mm.
Chatwin 1955, 81, fig 11.16.

**J239 CHAIN**
Weoley Castle, Birmingham, West Midlands.
*c*1270–1600. Probably from well.
Three flat figure-eight links, only one drawn.
Probably associated with bucket **J138**. Total L 560mm.
Birmingham City Museum, 835. For site see Oswald 1962.

**J240 CHAIN**
Winchester, Hampshire.
Late 11th–12th century.
Six flat, S-shaped links. L 98mm.
Goodall 1990-15, fig 245.2574.

**J241 CHAIN**
Gomeldon, Wiltshire.
Second half 13th century.
S-shaped links. L 44mm.
Musty and Algar 1986.

**J242 LINK AND HOOK**
Wroughton Copse, Fyfield Down, Wiltshire.
13th century (?mid) to 14th century.
S-shaped link and looped hook. L 82mm.
Excavated by P J Fowler.

**J243 CHAIN**
King's Lynn, Norfolk.
*c*1250–1300.
Four variously complete links with opposed ends. L 59mm.
Goodall and Carter 1977, 296, fig 134.60.

**J244 SWIVEL RING AND HOOK**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Complete. L 47mm.
Goodall 1979a, 118, fig 61.31.

**J245 SWIVEL RING AND HOOK**
Somerby, Lincolnshire.
15th–mid 16th century.
Complete. L 108mm.
Mynard 1969, 81, fig 11.IW 29.

**J246 SWIVEL HOOK AND RING**
Goltho, Lincolnshire.
Near fire-pit in croft A: late Saxon to late 14th or early 15th century. Complete.
L 120mm.
Goodall 1975a, 87, fig 41.108.

**J247 SWIVEL RING AND HOOK**
Oxford.
13th–16th century.
Swivel hook, broken ring and fragmentary link (not drawn), found with barrel padlock with shackle **I90**. L 118mm.
Excavated by T G Hassall. From Greyfriars burial ground.

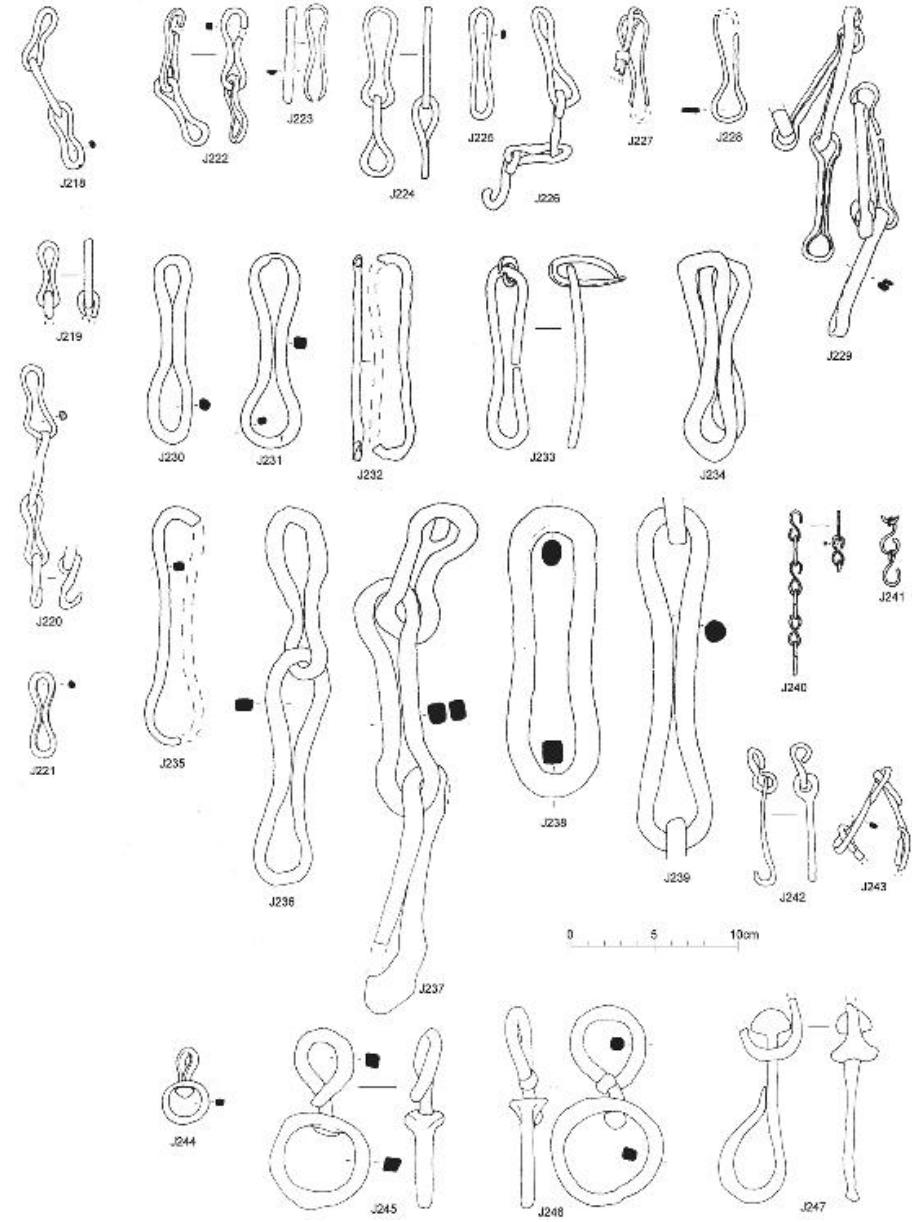



FIGURE 11.16
*Chains, links, and chain fittings*

**J248 SWIVEL RING, HOOK AND SHAFT FITTING**
Badby, Northamptonshire.
Mid to late 14th century.
Complete. Length of swivel: 155mm.
Excavated by Mrs M Gray.

**J249 SWIVEL RING AND HOOK**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Swivel hook broken. D 31mm.
Goodall 1977f, 47, iron object fig 226.

**J250 SWIVEL RING**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Ring broken. D 31mm.
Goodall 1977f, 47, iron object fig 227.

**J251 SWIVEL RING**
Winchester, Hampshire.
15th–16th century.
Complete. D 32mm.
Goodall 1990-15, fig 246.2591.

**J252 SWIVEL RING**
Wharram Percy, North Yorkshire.
Late 15th–early 16th century.
Complete. D 34mm.
Goodall 1979a, 118, fig 61.33.

**J253 SWIVEL RING**
Kirkcudbright Castle, Dumfries and Galloway.
*c*1288–1308.
Complete. D 50mm.
Dunning 1957–58, 138, fig 7.5.

**J254 SWIVAL RING**
Hangleton, West Sussex.
13th–14th century.
Complete. D 59mm.
Holden 1963, 171, fig 37.3.

**J255 SWIVEL RING**
Upton, Gloucestershire.
Late 13th to late 14th century.
Complete. D 68mm.
Hilton and Rahtz 1966, 121, fig 14.37.

**J256 SWIVEL HOOK**
Lyveden, Northamptonshire.
Second half 13th century.
Complete. L 28mm.
Bryant and Steane 1971, 65, fig 17s.

**J257 SWIVEL HOOK**
Goltho Manor, Licolnshire.
*c*1125–50.
Hook tip broken. L 35mm.
Goodall 1987, fig 159.125.

**J258 SWIVEL HOOK**
Northampton.
End 15th century.
Complete. L 40mm.
Goodall *et al* 1979, 273, fig 119.77.

**J259 SWIVEL HOOK**
London.
Late 13th to mid 14th century.
Complete. L 47mm.
Henig 1974, 195, fig 39.95.

**J260 SWIVEL HOOK**
Wharram Percy, North Yorkshire.
Early 15th century.
Swivel hook and bar. L 52mm.
Goodall 1979a, 118, fig 61.32.

**J261 SWIVEL HOOK**
Hangleton, West Sussex.
13th–14th century.
Complete. L 53mm.
Holden 1963, 171, fig 37.4.

**J262 SWIVEL HOOK**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Hook distorted. L 102mm.
Goodall 2002, fig 7.5, no. 61.

**J263 SWIVEL HOOK**
Newbury, Berkshire.
Mid 15th century.
Complete. L 109mm.
Goodall 1997, fig 21, no. 40.

**J264 SWIVEL RINGS**
West Whelpington, Northumberland.
Medieval.
Pair of swivel rings. L 74mm.
For site see Jarrett 1962; 1970.

**J265 SWIVEL RINGS**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Pair of rings. L 63mm.
Goodall 1988, fig 81.97; Borenius and Charlton 1936.

**J266 SWIVEL RINGS**
Sawtry, Cambridgeshire.
15th–early 16th century.
Pair of rings. L 61mm.
Moorhouse 1971b, 85, fig 4.4.

**J267 SWIVEL HOOK**
Winchester, Hampshire.
12th–early 13th century.
Hook broken. L 89mm.
Goodall 1990-15, fig 246.2585.

**J268 SWIVEL ROD AND LOOP**
Stonar, Kent.
*c*1275–1385.
Loop broken. L 245mm.
Excavated by N Macpherson-Grant.

**J269 SWIVEL HOOK**
Wallingstones, Hereford and Worcester.
Post-1500 destruction layer on site occupied from *c*1200.
Swivel hook with angled shank. L 193mm.
Bridgewater 1970–72, 104, no. 95.

**J270 SWIVEL ROD**
Goltho, Lincolnshire.
Late 14th–early 15th century.
Complete, tip perforated. L 100mm.
Goodall 1975a, 87, fig 41.106.

**J271 SWIVEL LOOP**
Winchester, Hampshire.
?1432–33.
Loop with opposing knobbed terminals.
Non-ferrous plating. D 38mm.
Goodall 1990-15, fig 246.2587.

**J272 CHAIN FITTING**
Winchester, Hampshire.
Late 15th–early 16th century.
Swivel ring and hook support openwork, barrel-shaped cage with further swivel hooks through the end-plates holding looped arms with hinged clips closed by springs. Tinned.
W 79mm.
Goodall 1990-15, fig 246.2590.

**J273 HOOK**
Keighton, Nottinghamshire.
Site: mid 12th to late 15th century.
Looped hook. L 125mm.
Coppack 1971, 58, fig 8.8.

**J274 HOOK**
Clough Castle, Co. Down.
*c*1250–75.
Looped hook. L 86mm.
Waterman 1954, 137, fig 11.7.

**J275 HOOK**
Stretham, East Sussex.
Site: 11th century to *c*1450.
Looped hook. L 79mm.
Excavated by A Barr-Hamilton.

**J276 HOOK**
Winchester, Hampshire.

15th century.
Hook with sprung loop. L 55mm.
Goodall 1990-15, fig 246.2588.

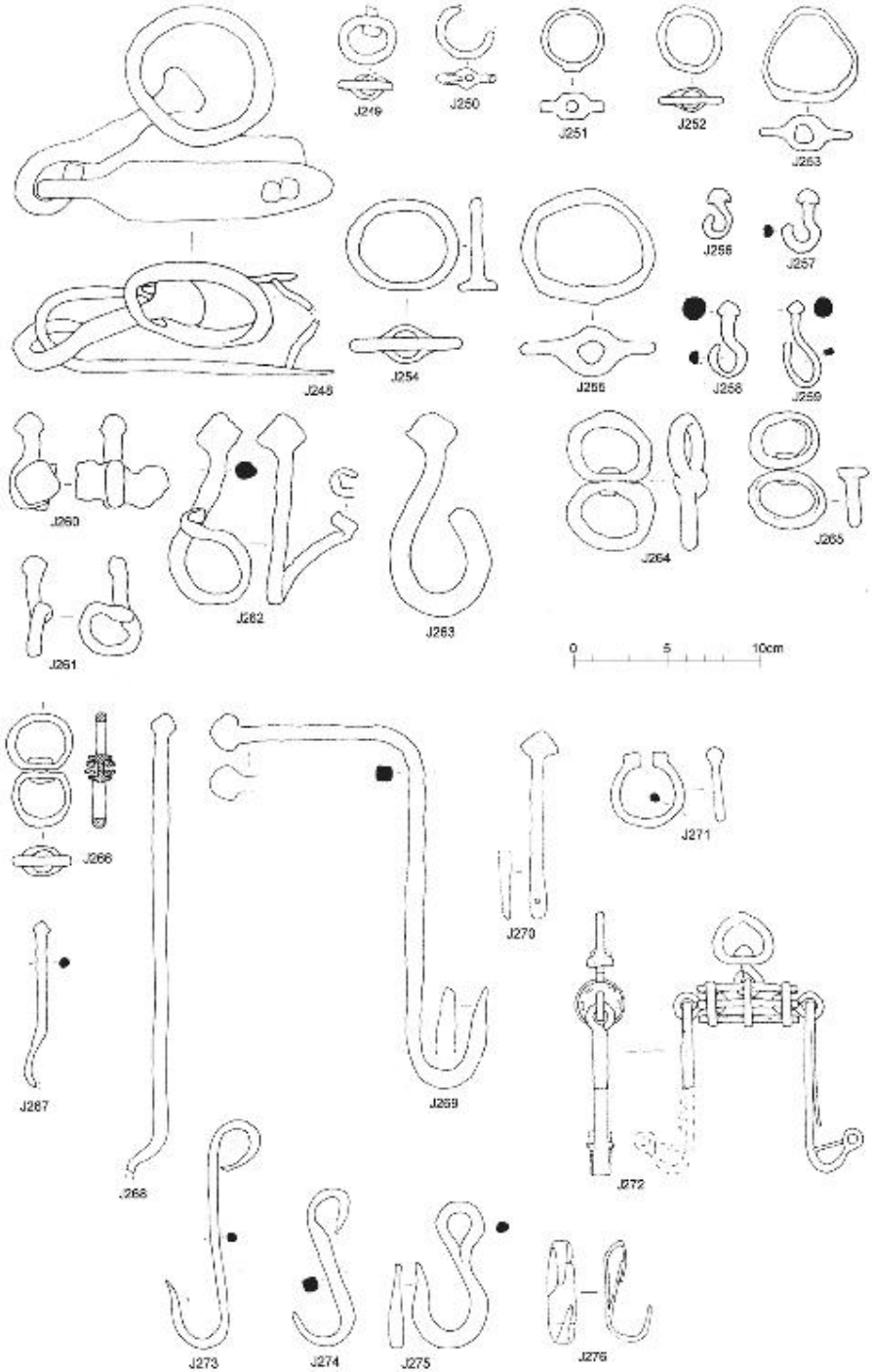


FIGURE 11.17
*Chain fittings and hooks*

**J277 RING**
Winchester, Hampshire.
?Mid 14th century.
Circular ring. D 24mm.
Goodall 1990-15, fig 246.2605.

**J278 RING**
Wharram Percy, North Yorkshire.
Early 15th century.
Circular ring. D 26mm.
Goodall 1979a, 118, SF 12676.

**J279 RING**
Bolton, Fangfoss, Humberside.
Mid 14th century.
Circular ring. D 29mm.
Goodall 1978b, 143, fig 30.30.

**J280 RING**
Winchester, Hampshire.
Late 11th–12th century.
Circular ring. D 31mm.
Goodall 1990-15, fig 246.2599.

**J281 RING**
Winchester, Hampshire.
12th century.
Circular ring. D 36mm.
Goodall 1990-15, fig 246.2602.

**J282 RING**
Winchester, Hampshire.
13th–14th century.
Circular ring. D 39mm.
Goodall 1990-15, fig 246.2606.

**J283 RING**
Winchester, Hampshire.
?Late 14th–15th century.
Circular ring. Non-ferrous plating. D 43mm.

Goodall 1990-15, fig 246.2609.

**J284 RING**
Winchester, Hampshire.
?Late 14th century.
Circular ring. D 47mm.
Goodall 1990-15, fig 246.2607.

**J285 RING**
Alsted, Surrey.
*c*1250–1405.
Circular ring. D 60mm.
Goodall 1976a, 56, fig 36.47.

**J286 RING**
Winchester, Hampshire.
Probably 13th–14th century.
Broken circular ring. D 79mm.
Goodall 1978a, 28, fig 9.11.

**J287 RING** (not illustrated)
Upton, Gloucestershire.
Late 13th–late 14th century.
Near circular ring. D 86mm.
Hilton and Rahtz 1966, 120.

**J288 WASHER**
Staines, Surrey.
1300–1500.
Flat circular washer. D 41mm.
Excavated by K R Crouch.

**J289 WASHER**
Winchester, Hampshire.
15th–early 16th century.
Flat, circular washer. D 50mm.
Goodall 1990-15, fig 246.2619.

**J290 WASHER**
Winchester, Hampshire.
15th–early 16th century.
Flat, circular washer. D 66mm.

Goodall 1990-15, fig 246.2616.

**J291 COLLAR**
Castell-y-Bere, Gwynedd.
Site: *c*1221–1295.
Circular collar. D 27mm.
Butler 1974, 98, fig 9.31.

**J292 COLLAR**
Strixton, Northamptonshire.
Late 13th century.
Circular collar, broken. D 31mm.
Hall 1973, 113, fig 4.29.

**J293 COLLAR**
London.
Late 13th to mid 14th century.
Circular collar with overlapping ends.
D 30mm.
Henig 1974, 195, no. 101.

**J294 COLLAR**
Northampton.
Medieval.
Circular collar. D 34mm.
Goodall *et al* 1979, 273, fig 119.76.

**J295 COLLAR**
Grenstein, Norfolk.
Late 14th or possibly early 15th century.
Irregular, nailed collar. D 39mm.
Goodall 1980c, fig 77, no. 23.

**J296 COLLAR**
Winchester, Hampshire.
Late 13th to 14th century.
Circular collar. D 38mm.
Goodall 1990-10, fig 81.555.

**J297 COLLAR**
Waltham Abbey, Essex.
Early 16th century.

Circular collar. D 38mm.
Excavated by P J Huggins. From Romeland.

**J298 COLLAR**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Circular collar with welded, overlapping ends. D 40mm.
Goodall 1988, fig 81.101; Borenius and Charlton 1936.

**J299 COLLAR**
Waltham Abbey, Essex.
Destruction level of 1540.
Oval collar with overlapping ends. D 45mm.
Huggins 1972, 124 (from F64).

**J300 COLLAR**
Old Sarum (east suburb), Wiltshire.
Principally medieval, to 14th century.
Circular collar, vertical wood graining inside. D 41mm.
Salisbury and South Wiltshire Museum, Salisbury 8/1932, O.S.C117.

**J301 COLLAR**
Wintringham, Cambridgeshire.
Early 14th century.
Circular collar. D 46mm.
Goodall 1977a, 257, fig 45.55.

**J302 COLLAR**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Circular collar. D 62mm.
Goodall 2002, fig 7.5, no. 53.

**J303 COLLAR**
Lyveden, Northamptonshire.
1475 to 1500.
Cylindrical collar. D 19–22mm.
Steane and Bryant 1975, 138, fig 52.239.

**J304 COLLAR**
Folkestone, Kent.
Mid 12th century.

Cylindrical collar. D 50mm.
Pitt-Rivers 1878, 463, pl XVIII.12.

**J305 COLLAR**
Pleshey Castle, Essex.
Early/mid 16th century to recent times, but including redeposited material.
Cylindrical collar. D 30–32mm.
Goodall 1977c, 177, fig 39.30.

**J306 COLLAR**
Grenstein, Norfolk.
Site 12th to late 14th or early 15th century.
Cylindrical collar. D 45mm.
Goodall 1980c, fig 77.

**J307 COLLAR**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Sub-rectangular collar with overlapping ends, one side lozenge-shaped. W 37mm.
Goodall 2002, fig 7.5, no. 54.

**J308 COLLAR**
Lyveden, Northamptonshire.
Second half 13th century.
Rectangular collar. W 51mm.
Bryant and Steane 1971, 57, fig 14k.

**J309 COLLAR**
King's Lynn, Norfolk.
*c*1280–1350.
Sub-rectangular collar. W 55mm.
Goodall 1977, 296, fig 134.57.

**J310 COLLAR**
Wharram Percy, North Yorkshire.
Early 15th century.
Rectangular collar with overlapping ends, broken. W 58mm.
Goodall 1979, 118, fig 61.28.

**J311 COLLAR**

Lyveden, Northamptonshire
*c*1200 to 1350.
Rectangular collar. W 94mm.
Steane and Bryant 1975, 134–135, fig 50.200.

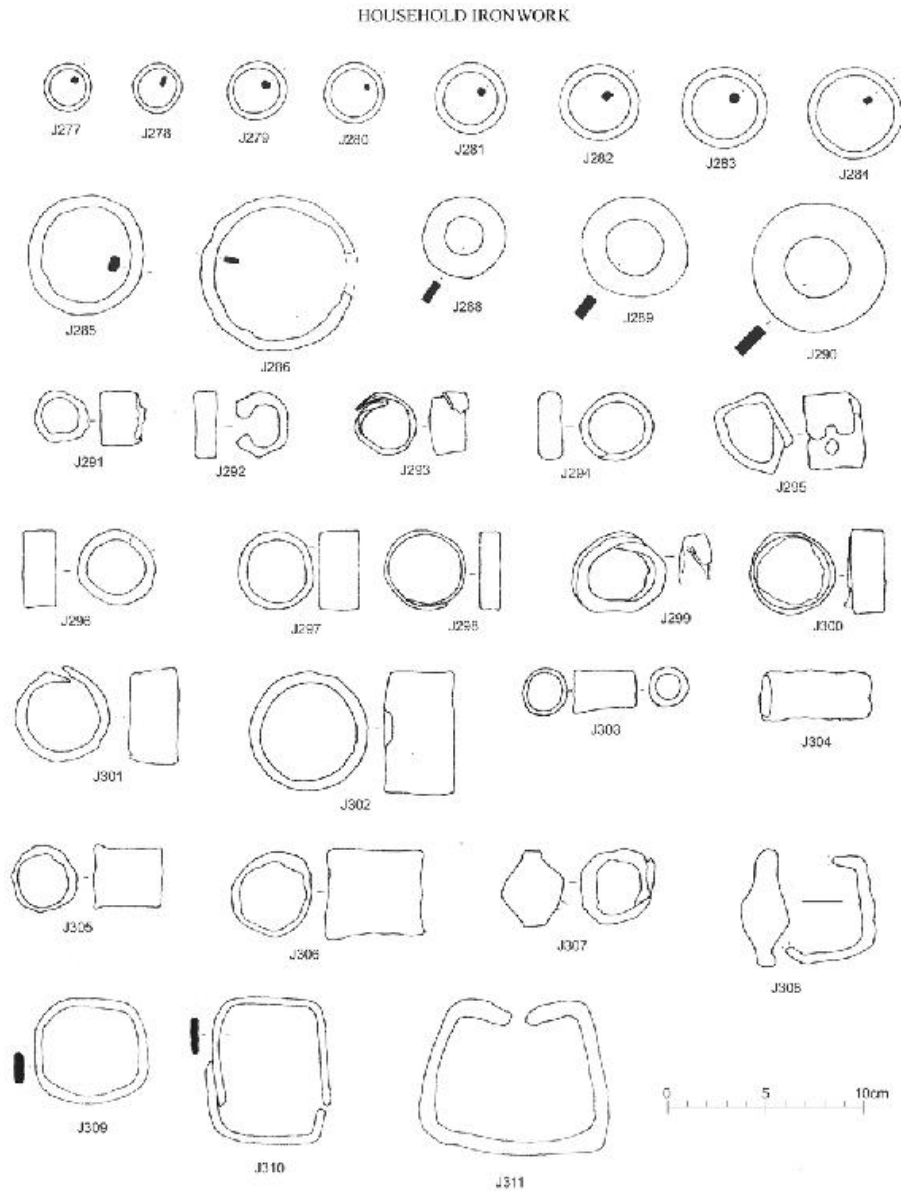



FIGURE 11.18
*Rings, washers, and collars*

# 12
# Buckles and Personal Equipment

## 12.1 Buckles

Medieval buckles were made of iron, copper alloy, pewter, gold, silver, and occasionally bone, and of all these the iron buckles are generally the largest, plainest and most numerous. Some do, however, have decorative grooves or shaping, and a substantial number retain traces of nonferrous plating, probably tinning. Iron buckles **K1–274**, many of which retain their pins, and some their buckle plates, have been classified according to their frame shapes. They are grouped chronologically within each type.

### D-shaped buckles

D-shaped buckles such as **K1–82** and **K83–108** are the most common medieval iron buckles, their frames varying in shape from the flattened D-shape of **K20** or **K54**, through a rounded (**K9** or **K56**) or pointed (**K12** or **K19**) D-shape, to the elongated D-shape of **K3** or **K65**. The variety of shape seems to have little chronological significance, one merging into another and defying detailed subdivision.

Belts or straps were attached round the straight pin bars of these buckles, many undoubtedly without any other metal fitting, although **K18**, **K40**, **K58**, **K59**, **K76** and possibly **K57** have iron buckle plates which were riveted in place. The buckle frames are generally forged in one piece, but **K7**, **K32**, **K38** and **K66** have free, overlapping ends. The corners of the pin bars of **K24**, **K39** and **K82** are flattened and expanded, and **K7**, **K9**, **K21**, **K25**, **K38**, **K73** and **K87** have grooved decoration on the frame and almost invariably, when it is present, on the pin as well. The pins frequently rest directly against the plain frame, but on **K25**, **K27–28** and **K38** they rest in shallow depressions, and on **K21**, **K24**, **K39**, **K60** and **K62** in expanded pin rests.

D-shaped buckles are found throughout the medieval period.

# Flattened oval buckles

The four buckles of this type, **K109–112**, are from contexts which span the medieval period. **K110** has decorative grooves.

## Rectangular buckles

Rectangular buckles **K113–138** vary in shape from the near square shape of **K116** or **K121** to the true rectangular shape of **K117** or **K138**, the pin set in these latter cases on either a long or short side of the frame. The cylinders on **K113**, **K116**, **K134** and **K137** imply that these buckles in particular may come from a harness, the revolving cylinders allowing straps to pass through or round without excessive chafing. A number of the buckles must, because of their elaboration, come from dress belts. These include **K119** and **K126**, which have elaborate frames and buckle plates, and **K120** and **K125** which have simply shaped buckle plates.

Rectangular buckles are not particularly common but enough survive to indicate that the type was used throughout the medieval period.

## Trapezoidal buckles

Buckles **K139–153** have frames of trapezoidal shape with the pin, where it survives, almost invariably mounted on the longer of the parallel arms. Half of the buckles retain the sheet iron cylinders against which their pins rested, suggesting that they come from harness. The closely dated examples of the type come from 14th to 16th-century contexts.

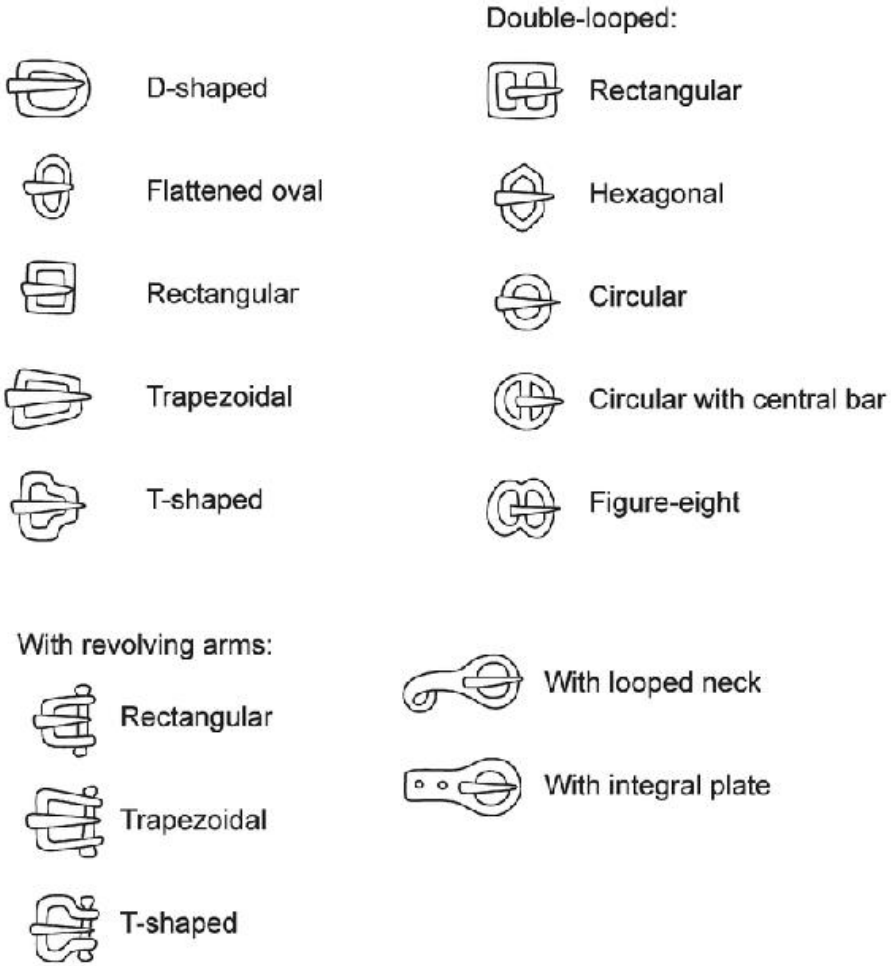



FIGURE 12.1
*Main types of buckle*

## T-shaped buckles

T-shaped buckles **K154–159** come principally from 13th to 14th-century contexts, although few examples are known. None of the buckles retains its pin, although **K157** has a sheet iron cylinder on the narrower of the parallel arms, implying that the pin was set on the longer arm. Most of the buckles are plain, but **K156** has decorative grooves. it is possible that some examples come from armour, since a number of 15th-century helms have such buckles to attach them to the body armour (mann 1933, 153).

## Buckles with revolving arms

Buckles **K160–203** have rectangular, trapezoidal and T-shaped frames incorporating a revolving arm set between the looped ends of the side arms. These buckles, most of them quite large, are probably from harness, their revolving arms equivalent to the sheet iron cylinders of other buckles in allowing the free passage of a strap with a minimum of chafing.

### *Rectangular buckles with revolving arms*

**K160–188** have rectangular frames with the same varieties of square and rectangular shapes found on buckles **K113–138**. The frames are generally plain, although **K162** and **K169** have decorative grooves, and the type is found in contexts throughout the medieval period.

### *Trapezoidal buckles with revolving arms*

**K189–196** are buckles with trapezoidal frames whose pin bar forms either the long or short of the parallel side, the other being the revolving arm. The frames vary considerably in size, from the smaller **K190–191** to the larger **K192**. **K195** is unusual in having a rigid 'revolving' arm. t he buckles come from 12th to 16th-century contexts.

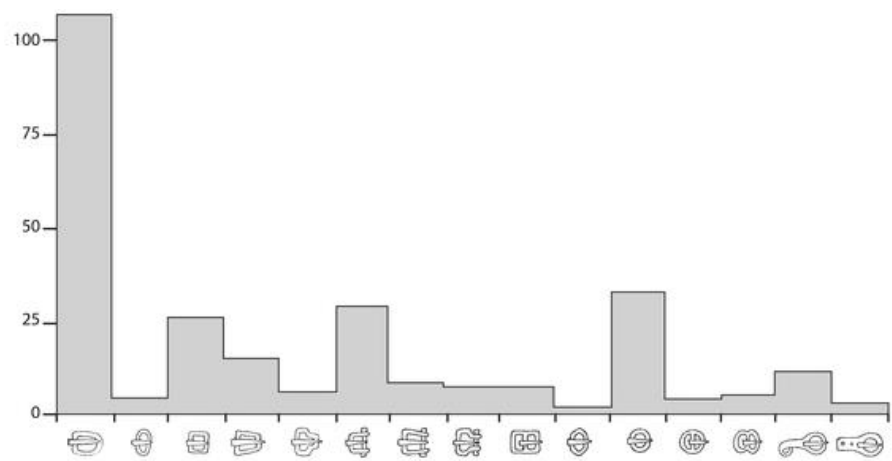



FIGURE 12.2
*Frequency of types of medieval buckle*

### *T-shaped buckles with revolving arms*

Buckles **K197–203** are mostly incomplete, although **K197** and **K200** are complete and retain pins on their longer arms. The buckles come from 12th to 15th-century contexts.

### *Revolving arms from buckles*

Several of the buckles noted above have incomplete frames which lack revolving arms similar to **K204–208**. Most are straight-sided, **K208** unusually having a central pin tip groove. Some of the arms which still form parts of buckles are swollen or baluster-shaped.

## Rectangular double-looped buckles

The few examples of this type of buckle, **K209–215**, vary greatly in size, as **K214** and **K211** demonstrate. All have pins set on the middle arm, with the exception of **K212** which has lost its pin, and on **K211** this arm also carries a buckle plate for attachment to a broad strap. **K215**, with its shaped attachment plate, is from a spur. The frames are generally flat and plain, although **K210** and **K213** are slightly shaped in side view, and **K210** is also decorated. These buckles are almost all of late medieval date.

## Hexagonal buckles

Buckles with hexagonal frames are occasionally forged in iron (**K216–217**), and they are clearly related to copper-alloy buckles of the type known from Upton (Hilton and Rahtz 1966, 122, fig 15.4), Lyveden (Steane and Bryant 1975, 109, fig 42.17) and elsewhere. **K216** in particular, which retains its buckle plate but lacks its iron pin, appears to be a copy of a frame shape more appropriate to copper alloy.

## Circular buckles

**K218–250** are circular iron buckles, the larger ones (**K218**, **K221** and **K223**)

resembling the size of many of those of copper alloy. The other buckles are smaller, generally under 20mm in diameter, and most between 12 and 15mm. These small buckles are from 13th-century and later contexts, and come from shoes and clothing. **K220**, **K222** and **K232** are on straps, or on the uppers of leather shoes, and a small buckle from London (Russell-Smith 1956) comes from a 'breche' belt.

## Circular buckles with central bars

**K251–254** are circular buckles with central bars, all probably from spurs, **K251–252** retaining the looped attachment plates which were originally joined to spur terminals. A broken rowel spur from Southampton (Harvey 1975b, 287, fig 257.2106–07) has a buckle of similar size to **K253–254**, although it has a looped attachment plate, omitted from the drawing. These buckles are of late medieval date.

## Figure-eight shaped buckles

Buckles **K255–260**, sometimes called spectacle buckles, are a late medieval type often used with rowel spurs, including some of 15th-century date from London (Ward Perkins 1967, fig 35.5–7).

## Buckles with looped necks

**K261–271**, all buckles with looped necks, were mainly used with spurs, the loop being attached to the terminal on the outer side of the spur and the buckle used to adjust the straps. **K261–266** have short necks, that on **K263** with an additional side ring, and **K267–271** have elongated necks, **K268** attached to a Y-shaped, looped fitting. An early 14th-century rowel spur from London (Ward Perkins 1967, fig 30.7) has a buckle not unlike **K263–266**. The short-necked buckles come principally from 11th to 14th-century contexts, those with elongated necks from 13th-century and later contexts.

## Buckles with integral plates

Buckles **K272–274** have integral plates which were riveted directly to a strap.

**K274** has a copper-alloy pin, but the others merely have the holes for them. These buckles may have been used with spurs, and come from contexts spanning the 12th to 16th centuries.

### Buckle pins

**K275–278** are selected buckle pins which are flat or curved in side view with straight or down-turned tips. **K277** has non-ferrous plating and is probably from a buckle with a frame with decorative grooves.

### Buckle plates

**K279–282** are buckle plates used to attach certain types of buckle to belts and straps. They have either one or two rivet holes; **K282** has closed sides and **K281** a shaped, decorated edge.

### Discussion

Buckles were used to fasten dress belts, sword belts, harness straps and spurs, and the size and shape of the medieval buckles reflects this range of use. Many must be from harness, as the sheet iron cylinders and revolving bars of certain buckles imply. Figure 12.1 shows the number of buckles of each type.

Most medieval buckles are plain, but a number with D-shaped frames and several of other shapes have decorative grooves. They come mainly from 12th to 13th-century contexts. **K216** appears to be a copy of a buckle shape more appropriate to copper alloy, and it is of interest that no other frames attempt to copy any complicated mouldings, surface decoration being restricted to simple grooves.

Buckles were frequently attached directly to belts or straps, but a number have riveted buckle plates, particularly those used with spurs.

## 12.2 Strap-Ends

Belts worn as part of dress, and probably straps in harness, often had a strap-end riveted to the loose end. Most are of copper alloy and are moulded or

shaped, but **K283–285** are plain iron examples. In shape they are either trapezoidal or rectangular, with one or two rivets, and at least two have non-ferrous plating intended to counter corrosion and present a better appearance.

## 12.3 Belt Slides

After fastening with a buckle, the free end of a belt was sometimes held firm by a belt slide, of which **K286–288** may be examples. If so they were probably used with broad belts.

## 12.4 Belt Hooks

Belt hooks **K289–291** were used to support metal-framed purses, the belt passing through the rectangular loop in the shorter arm and the central loop of the purse frame over the longer upright arm. The hooked tops of these upright arms were intended to prevent the purse becoming detached from the hook. **K289** is plain but **K290–291** have moulded upright arms. None of these belt hooks is certainly medieval.

## 12.5 Purse Frames

Medieval metal purse frames, not introduced to Britain until the late medieval period, are of iron or copper alloy, or of iron with copper-alloy fittings. They commonly consist of a purse bar, suspended from the belt by its central loop, which supported from its end one or two roughly semicircular metal arms from which the bag hung (Ward Perkins 1967, 158–171).

**K292–294** are of iron and of the most basic type, having a centrally placed, swivelling suspension hook or loop supporting a circular or oval ring frame to which the bag was attached. **K292** is from a context of *c*1350–1500, and the others are 15th to 16th century.

**K295–297**, from 15th to 16th-century contexts, belong to more elaborate types of purse frame which consist of straight purse bars supporting pendent frames, one of which survives incompletely on **K295**. The bags were either attached directly through holes in the iron frame, or through copper-alloy

mounts fitted to the purse bar. **K295** has holes in both bar and frame, one of those in the bar retaining a fragment of wire, whereas **K296–297** are plain and may have lost copper-alloy fittings similar to those on some purse bars from London (Ward Perkins 1967, pl XXXIV, 1, 3). Neither of these latter two bars has been X-rayed, however, and corrosion could obscure either brazing metal from non-ferrous plating or holes. **K296–297** may, therefore, be of Ward Perkins' Type A3, and **K295** is probably related to Type A4 or A5 (Ward Perkins 1967, 165–166).

**K298** is the decorative pin from the purse bar of one of the more complex types of iron purse frame, Type A6 (Ward Perkins 1967, 166–167, pl XXXVI).

## 12.6 Scabbard Fittings

Later medieval scabbards were attached to sword belts by mounts similar to **K299**, which was found with part of a single-edged blade from a sword or dagger. It is of iron, but similar mounts of copper alloy from the tops of scabbards include one from London (Ward Perkins 1967, 37, 271, pl V). Chapes are normally also of copper alloy, but **K300** is a sheet iron example with a simple knobbed terminal.

## 12.7 Jew's Harps

Jew's harps are small musical instruments with looped frames and reeds which were played within the mouth by the tongue. **K301–304** are of iron, **K302** the most complete, and all with the characteristically shaped frame of lozenge section. Some copper-alloy jew's harps are also known, but with iron reeds.

**K1 BUCKLE**
Meon Hill, Hampshire.
Late 11th century. Found beside left hip of skeleton.
Frame and broken pin. W 30mm.
Liddell 1932–34, 154, fig 15.MB.

**K2 BUCKLE**
Stockbridge Down, Hampshire.
Late 11th century. Found with two rings (**J193–194**) on skeleton in

position suggesting they came from belt.
Frame and broken pin. W 34mm.
Hill 1935–37, 250, pl 1.

**K3 BUCKLE**
Stockbridge Down, Hampshire.
Late 11th century. Found within pelvis of skeleton.
Frame and pin. W 34mm.
Hill 1935–37, 250, pl 1e.

**K4 BUCKLE**
Stockbridge Down, Hampshire.
Late 11th century. In grave near disturbed skeletons.
Frame and pin. W 37mm.
Hill 1935–37, 250, pl 1f.

**K5 BUCKLE**
Stockbridge Down, Hampshire.
Late 11th century. From near hip joint of skeleton.
Frame and pin. W 38mm.
Hill 1935–37, 250, pl 1d.

**K6 BUCKLE**
Goltho Manor, Lincolnshire.
11th century.
Frame. W 53mm.
Goodall 1987, fig 159.133.

**K7 BUCKLE**
Winchester, Hampshire.
11th–mid 12th century.
Frame with overlapping free ends forming pin bar. Decorative grooves. Non-ferrous plating. W 33mm.
Goodall 1990-12, fig 136.1266.

**K8 BUCKLE**
Goltho Manor, Lincolnshire.
*c*1100–50.
Frame and pin. W 59mm.
Goodall 1987, fig 159.138.

**K9 BUCKLE**

Goltho Manor, Lincolnshire.
*c*1100–50.
Frame and pin, frame with grooved decoration. W 61mm.
Goodall 1987, fig 159.139.

**K10 BUCKLE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Frame and pin. W 32mm.
Goodall 1977f, 48, iron object fig 2.40.

**K11 BUCKLE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Frame and pin. W 39mm.
Goodall 1977f, 48, iron object fig 2.41.

**K12 BUCKLE**
Folkestone, Kent
Mid 12th century.
Buckle and broken pin. W 70mm.
Pitt-Rivers 1883, 463, pl XVIII.9.

**K13 BUCKLE**
Winchester, Hampshire.
Mid to late 12th century.
Frame, ends of pin bar shaped. W 57mm.
Goodall 1990-12, fig 136.1270.

**K14 BUCKLE**
Walton, Aylesbury, Buckinghamshire.
12th century.
Frame and pin. W 36mm.
Cocks 1904–09, 285.

**K15 BUCKLE**
Walton, Aylesbury, Buckinghamshire.
12th century.
Frame. W 55mm.
Cocks 1904–09, 285.

**K16 BUCKLE**

Walton, Aylesbury, Buckinghamshire.
12th century.
Frame and pin. W 57mm.
Cocks 1904–09, 285.

**K17 BUCKLE**
Winchester, Hampshire.
*c*1138–1141.
Frame and pin. W 60mm.
Goodall 1990-12, fig 136.1267.

**K18 BUCKLE**
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Buckle, frame and plate. L 53mm.
Casey 1931, 252, pl XXXV.5.

**K19 BUCKLE**
Lydney Castle, Gloucestershire.
12th century, possibly into 13th century.
Frame and pin. W 68mm.
Casey 1931, 252, pl XXXV.4.

**K20 BUCKLE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th–13th century.
Frame. W 66mm.
Excavated by P J Fowler.

**K21 BUCKLE**
Old Sarum, Wiltshire.
Possibly 12th–13th century.
Frame and pin. Frame with pin rest and decorative grooves. W 84mm.
Salisbury and South Wiltshire Museum,
Salisbury, 8/1932. O.S.C107.

**K22 BUCKLE**
Ellington, Cambridgeshire.
Second or third quarter 12th to late 13th century.
Frame and pin. W 60mm.
Goodall 1971, 68, fig 12.10.

**K23 BUCKLE**
Wallingstones, Hereford and Worcester.
First half 13th century.
Frame. W 34mm.
Bridgewater 1970–72, 102, no. 21.

**K24 BUCKLE**
Dyserth Castle, Clwyd.
Site: 1241–63.
Frame and pin, the frame shaped and with pin rest. W 101mm.
Glenn 1915, fig 9D.

**K25 BUCKLE**
Winchester, Hampshire.
Mid 13th century.
Frame and pin, both with decorative groove and non-ferrous plating. W 46mm.
Goodall 1990-12, fig 136.1274.

**K26 BUCKLE**
Upton, Gloucestershire.
Mid to later 13th century.
Frame and pin. W 27mm.
Rahtz 1969a, 108, fig 12.121.

**K27 BUCKLE**
Winchester, Hampshire.
14th century.
Frame and pin, both with decorative groove and non-ferrous plating. W 51mm.
Goodall 1990-12, fig 136.1282.

**K28 BUCKLE**
Winchester, Hampshire.
Early to mid 13th century.
Broken frame with decorative grooves and non-ferrous plating. W 38mm.
Goodall 1990-12, fig 136.1273.

**K29 BUCKLE**
Portchester Castle, Hampshire.
13th century.
Frame and pin. W 55mm.

Hinton 1977, 201, fig 108.52, scale 2:3, not 1:3.

**K30 BUCKLE**
Southampton, Hampshire.
*c*1300.
Frame and pin possibly with non-ferrous plating. W 70mm.
Harvey 1975b, 279, fig 251.2006.

**K31 BUCKLE**
South Witham, Lincolnshire.
Late 13th century to 1308–13.
Frame. W 34mm.
Goodall 2002, fig 7.8, no. 97.

**K32 BUCKLE**
Winchester, Hampshire.
1250–1320.
Frame and pin, latter incomplete, both with non-ferrous plating. Overlapping free ends form pin bar. W 45mm.
Goodall 1990-12, fig 136.1277.

**K33 BUCKLE**
Goltho, Lincolnshire.
Late 13th–early 14th century.
Frame and pin with non-ferrous plating. W 50mm.
Goodall 1975a, 89, fig 41.115.

**K34 BUCKLE**
Winchester, Hampshire.
12th to 13th century.
Frame and pin. W 33mm.
Goodall 1990-12, fig 136.1275.

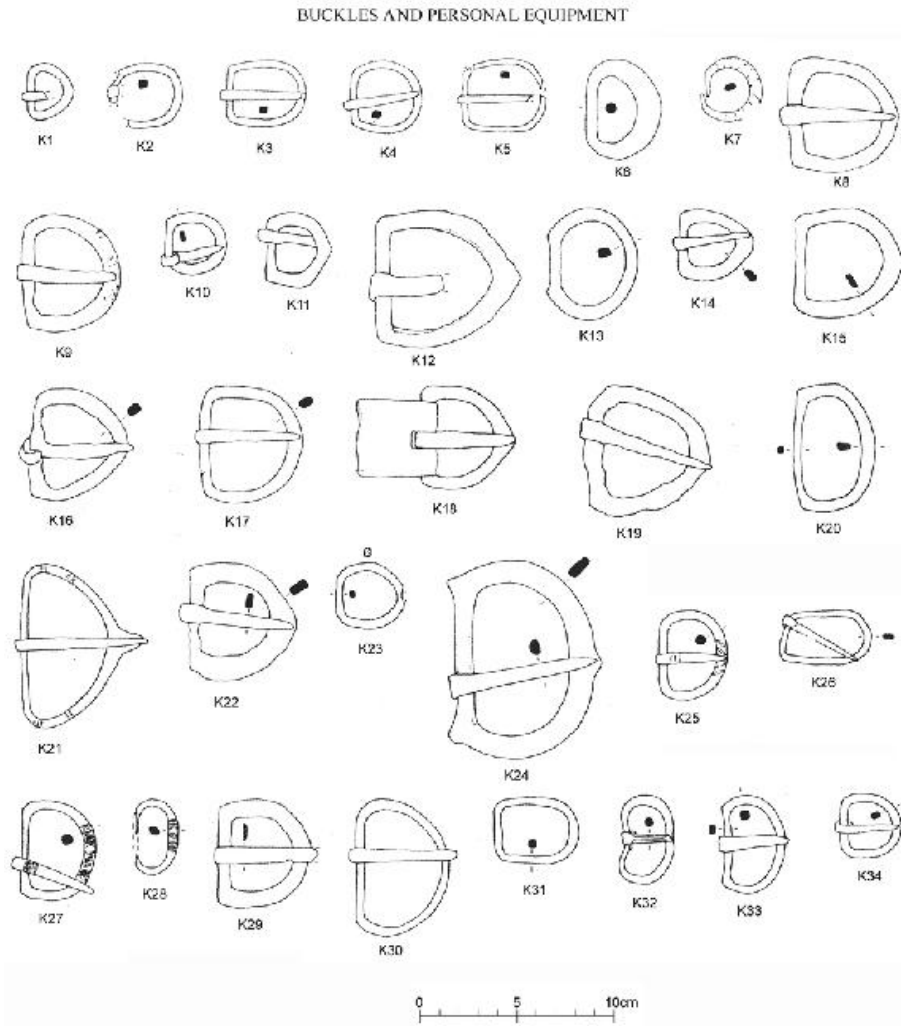



FIGURE 12.3
*Buckles*

**K35 BUCKLE**
Alsted, Surrey.
*c*1250–1350.
Frame. W 35mm.
Goodall 1976a, 56, fig 34.21.

**K36 BUCKLE**
Lyveden, Northamptonshire.
*c*1200–1350.
Frame. W 31mm.
Steane and Bryant 1975, 128, fig 48.110.

**K37 BUCKLE**
London.
Late 13th–mid 14th century.
Frame and pin. W 36mm.
Henig 1974, 191, fig 39.79.

**K38 BUCKLE**
London.
?Late 13th to mid 14th century.
Frame with distorted free ends and grooved decoration. W 51mm.
Henig 1974, 195, fig 39.82.

**K39 BUCKLE**
London.
Late 13th–mid 14th century.
Frame, shaped, with pin rest. W 66mm.
Henig 1974, 191, fig 39.80.

**K40 BUCKLE**
Upton, Gloucestershire.
Late 13th to late 14th century.
Frame, pin and broken plate with nonferrous plating. W 32mm.
Hilton and Rahtz 1966, 120, fig 14.24.

**K41 BUCKLE**
Upton, Gloucestershire.
Late 13th to late 14th century.
Frame and broken pin with non-ferrous plating. W 38mm.
Hilton and Rahtz 1966, 117, fig 14.18.

**K42 BUCKLE**
Seacourt, Oxfordshire.
Mid–late 13th to late 14th century.
Frame and pin. W 30mm.
Biddle 1961–62, 179, fig 30.16, scale wrong.

**K43 BUCKLE**
Seacourt, Oxfordshire.
Mid–late 13th to late 14th century.
Frame and pin. W 36mm.
Biddle 1961–62, 179, fig 30.15, scale wrong.

**K44 BUCKLE**
Seacourt, Oxfordshire.
Mid–late 12th to late 14th century.
Frame and pin. W 72mm.
Biddle 1961–62, 179, fig 30.17, scale 1:4, not 1:3.

**K45 BUCKLE**
Badby, Northamptonshire.
1198–1213 to late 14th century.
Frame and pin. W 76mm.
Excavated by Mrs M Gray.

**K46 BUCKLE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Frame and broken pin. W 33mm.
O'Neil 1944–45.

**K47 BUCKLE**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Frame and pin. W 32mm.
O'Neil 1944–45, 41, pl IX.19.

**K48 BUCKLE**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.
Frame. W 49mm.
O'Neil 1944–45.

**K49 BUCKLE**
Wintringham, Cambridgeshire.
Early 14th century.
Frame and pin. W 35mm.
Goodall 1977a, 258, fig 46.86.

**K50 BUCKLE**
Avebury, Wiltshire.
Early 14th century.
Frame and pin. W 35mm.
Keiller 1965, 178.

**K51 BUCKLE**
Netherton, Hampshire.
Early to mid 14th century.
Frame and pin. W 69mm.
Goodall 1990-28, fig 9.9 no. 473.

**K52 BUCKLE**
Bolton, Fangfoss, Humberside.
Mid 14th century.
Frame with non-ferrous plating. W 41mm.
Goodall 1978b, 143, fig 30.29.

**K53 BUCKLE**
Goltho, Lincolnshire.
Mid 14th century.
Frame and pin. W 47mm.
Goodall 1975a, 89, fig 41.117.

**K54 BUCKLE**
Badby, Northamptonshire.
Mid to late 14th century.
Frame and pin with non-ferrous plating.
W 57mm.
Excavated by Mrs M Gray.

**K55 BUCKLE**
Winchester, Hampshire.
Late 14th century.
Frame and broken pin. Non-ferrous plating.
W 40mm.
Goodall 1990-12, fig 137.1296.

**K56 BUCKLE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Frame and pin. W 79mm.
Macdonald and Laing 1974–75, 146, fig 1.6.

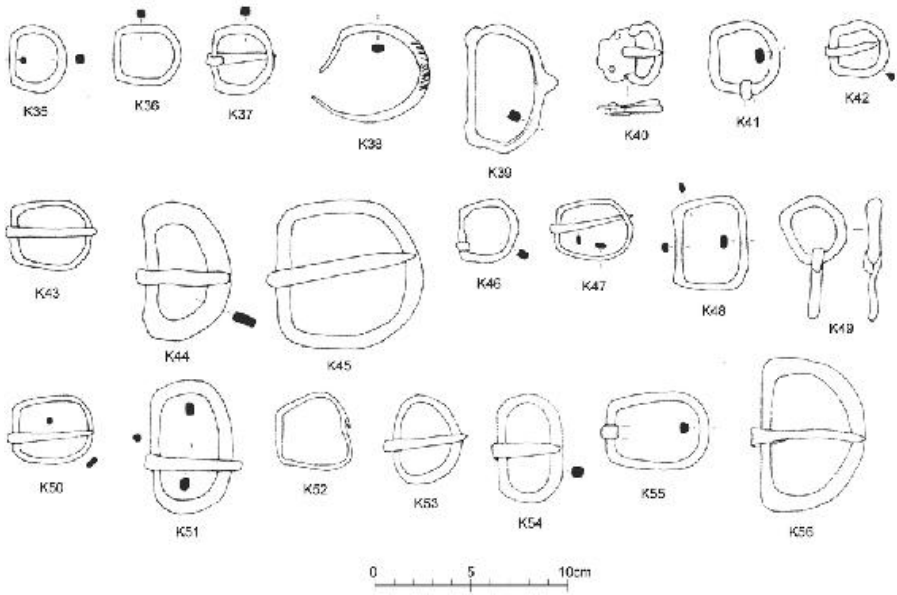



FIGURE 12.4
*Buckles*

**K57 BUCKLE**
London.
14th century.
D-shaped buckle attached to leather strap.
Pin broken. W 14mm.
Henig 1974, 199, fig 42.240.

**K58 BUCKLE**
Winchester, Hampshire.
14th century.
Frame, pin and broken plate with one rivet.
Non-ferrous plating. W 38mm.
Goodall 1990-12, fig 136.1280.

**K59 BUCKLE**
Boston, Lincolnshire.
14th century.
Frame, pin and plate. Frame and pin broken.
W 38mm.
Mayes 1965, 103, fig 6.

**K60 BUCKLE**
Winchester, Hampshire.
14th century.
Frame and pin, the frame with an expanded pin rest. W 36mm.
Goodall 1990-12, fig 136.1281.

**K61 BUCKLE**
Northolt Manor, Greater London.
14th century.
Frame. W 52mm.
Excavated by J G Hurst.

**K62 BUCKLE**
Winchester, Hampshire.
15th century.
Frame and pin, frame with expanded pin rest, pin broken. W 63mm.
Goodall 1990-12, fig 137.1285.

**K63 BUCKLE**
Southampton, Hampshire.
Probably 14th century, but possibly 15th century.
Frame and pin with non-ferrous plating.
W 42mm.
Harvey 1975b, 285, fig 255.2070.

**K64 BUCKLE**
Kettleby Thorpe, Lincolnshire.
14th–early 15th century.
Frame. W 33mm.
Goodall 1974a, 33, fig 18.11.

**K65 BUCKLE**
Goltho, Lincolnshire.
Late 14th–early 15th century.
Frame and pin. W 28mm.
Goodall 1975a, 89, fig 41.111.

**K66 BUCKLE**
Northampton.
Late 14th or 15th century.
Frame with distorted, free ends. W 44mm.
Goodall 1979b, 71, fig 17.21.

**K67 BUCKLE**
Wharram Percy, North Yorkshire.
Early 15th century.
Frame. W 49mm.
Goodall 1979a, 121, fig 63.75.

**K68 BUCKLE**
Northampton.
Later 15th century.
Frame and pin. W 66mm.
Goodall *et al* 1979, 273, fig 120.93.

**K69 BUCKLE**
Winchester, Hampshire.
15th century.
Frame and pin. W 74mm.
Goodall 1990-12, fig 137.1286.

**K70 BUCKLE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Frame. W 48mm.
Goodall 1979a, 121, fig 63.76.

**K71 BUCKLE**
London.
Late 15th–early 16th century.
Frame and pin. W 61mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**K72 BUCKLE**
London.
Late 15th–early 16th century.
Frame and pin. W 45mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**K73 BUCKLE**
Winchester, Hampshire.
Mid 15th–early 16th century.
Frame and pin with non-ferrous plating.
Decorative grooves on frame. W 47mm.
Goodall 1990-12, fig 137.1287.

**K74 BUCKLE**
Winchester, Hampshire.
Mid 15th–early 16th century.
Frame and pin broken. Non-ferrous plating.
W 39mm.
Goodall 1990-12, fig 137.1298.

**K75 BUCKLE**
Cambokeels, Durham.
Later 14th to early 16th century.
Frame. W 55mm.
Hildyard and Charlton 1947; Hildyard 1949.

**K76 BUCKLE**
Portchester Castle, Hampshire.
15th or early 16th century.
Frame and broken plate. W 25mm.
Hinton 1977, 201, fig 108.55, scale 2:3, not 1:3.

**K77 BUCKLE**
Somerby, Lincolnshire.
15th–mid 16th century.
Broken frame. W 58mm.
Mynard 1969, 81, fig 11.IW32.

**K78 BUCKLE**
Underbank, Sedbergh, Cumbria.
15th–16th century.
Frame. W 58mm.
Addyman *et al* 1963–66, 39, fig 6.3.

**K79 BUCKLE**
Winchester, Hampshire.
15th–16th century.
Frame and pin. W 31mm.
Goodall 1990-12, fig 137.1293.

**K80 BUCKLE**
Winchester, Hampshire.
Early to?mid 16th century.
Frame and pin with non-ferrous plating.
W 40mm.

Goodall 1990-12, fig 137.1290.

**K81 BUCKLE**
Winchester, Hampshire.
Early to?mid 16th century.
Frame and pin. W 38mm.
Goodall 1990-12, fig 137.1289.

**K82 BUCKLE**
Southampton, Hampshire.
*c*1550.
Frame and pin with non-ferrous plating.
W 67mm.
Harvey 1975b, 287, fig 257.2101.

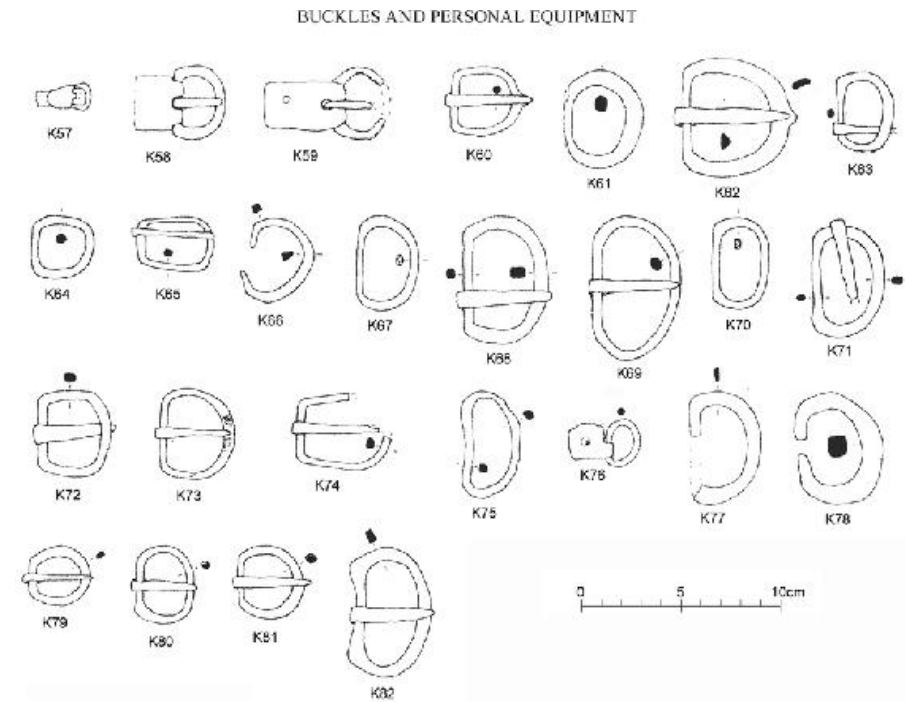



FIGURE 12.5
*Buckles*

**Not illustrated:**

**K83** Castle Acre Castle, Norfolk. 1140s from *c*1066. Broken frame, W 59mm, L 52mm. Goodall 1982.

**K84** Water Newton, Cambridgeshire.
Probably 11th–12th century. Frame and pin. W 59mm, L 43mm. Green

1962–63, 78, fig 4.3.

**K85** Goltho Manor, Lincolnshire.

*c*1100–50. Frame and pin. W 32mm, L 33mm. Goodall 1987, 184.

**K86** Goltho Manor, Lincolnshire.

*c*1100–50. Frame and broken pin with non-ferrous plating. W 57mm, L 48mm.

Goodall 1987, 184.

**K87** Goltho Manor, Lincolnshire.

*c*1100–50. Broken frame with grooved decoration and non-ferrous plating. W 57mm, L 53mm. Goodall 1987, 184.

**K88** Castle Tower, Penmaen, West Gla-morgan. 12th century into early 13th century. Broken frame and pin. W 22mm, L 38mm. Alcock 1966, 199, fig 9.2.

**K89** South Witham, lincolnshire. 1137–85 to *c*1220. Frame and pin. W 36mm, L 45mm.

Goodall 2002, fig 7.8, no. 94.

**K90–91** Loughor Castle, West Glamorgan.

Site: *c*1106 to late 13th century. Broken frames and pins. W 54mm, L 53mm; W 46mm, L 48mm. Excavated by J M Lewis.

**K92** Brandon Castle, Warwickshire. 13th century. Broken frame. W 77mm, L 35mm. Chatwin 1955, 81, fig 11.13.

**K93–94** South Witham, Lincolnshire. Late 13th century to 1308–13. Frame. W 34mm, L 42mm; W 31mm, L 30mm. Goodall 2002, fig 7.8.

**K95** Lyveden, Northamptonshire.

1200–1350. Broken frame. W 58mm, L 41mm. Steane and Bryant 1975, 129, fig 48.126.

**K96** Hadleigh Castle, Essex. 13th–14th century. Frame. W 52mm, L 33mm. Goodall 1975c, 142, fig 28.349.

**K97** Lyveden, Northamptonshire. *c*1150 to early 14th century. Frame and pin. W 40mm, L 43mm. Steane and Bryant 1975, 128, fig 48.109.

**K98** Somerby, Lincolnshire. 11th–15th century.

Frame and broken pin. W 35mm, L 28mm.

Mynard 1969, 82, fig 11.IW39.

**K99** Somerby, Lincolnshire. 11th–15th century. Frame. W 65mm, L 44mm. Mynard 1969, 81, fig 11.IW3.

**K100** Clarendon Palace, Wiltshire. Site: *c*1072 to later 15th century. Frame. W 49mm, L 35mm. Salisbury and South Wiltshire Museum, Salisbury, 47/1957.

**K101** Faxton, Northamptonshire. Site: 12th–15th century. Frame. W 42mm, L 24mm. Excavated by L A S Butler.

**K102–104** London. Late 15th to early 16th century. Three buckle frames

and pins. W 55, 50 and 42mm, L 42, 36 and 36mm respectively. Excavated by F C Willmot at 66 Foyle Road.

**K105** Hadleigh Castle, Essex. 16th century. Frame and pin. W 75mm, L 45mm. Goodall 1975c, 142, fig 28.354.

**K106** Weoley Castle, Birmingham, West Midlands. *c*1080–1600. Frame and broken pin.

W 38mm, L 30mm. Birmingham City Museum, WC 333.

**K107** Weoley Castle, Birmingham, West Midlands. *c*1270–1600. Frame and pin, tinned.

W 62mm, L 52mm. Birmingham City Museum, WC 343.

**K108** Somerby, Lincolnshire. 11th–mid 16th century. Frame. W 65mm, L 60mm. Mynard 1969, 81, fig 11.IW30.

**K109 BUCKLE**

Winchester, Hampshire.

Late 11th century.

Frame and pin. W 43mm.

Goodall 1990-12, fig 138.1308.

**K110 BUCKLE**

Winchester, Hampshire.

Late 12th–13th century disturbance.

Frame with decorative grooves and non-ferrous plating. W 51mm.

Goodall 1990-12, fig 138.1310.

**K111 BUCKLE**

Bolton, Fangfoss, Humberside.

Mid 14th century.

Broken frame. W 45mm.

Goodall 1978b, 143, fig 30.18.

**K112 BUCKLE**

London.

Late 15th–early 16th century.

Frame and pin. W 50mm.

Excavated by F C Willmot. Site at 66 Foyle Road.

**K113 BUCKLE**

Llantrithyd, South Glamorgan.

Early to mid 12th century.

Frame and pin, the frame with a broken sheet iron cylinder. W 36mm.

Goodall 1977f, 48, iron object fig 2.32.

**K114 BUCKLE**
Newbury, Berkshire.
*c*1170–1200.
Frame and pin. W 25mm.
Goodall 1997, fig 22, no. 44.

**K115 BUCKLE**
Ascot Doilly, Oxfordshire.
12th century.
Frame and broken pin. W 31mm.
Jope and Threlfall 1959, 266, fig 20.4.

**K116 BUCKLE**
Wroughton Copse, Fyfield Down, Wiltshire.
12th century.
Frame with sheet iron cylinder. W 65mm.
Excavated by P J Fowler.

**K117 BUCKLE**
Knaresborough Castle, North Yorkshire.
12th century.
Frame and pin. W 86mm.
Waterman 1953, 213, fig 1.23.

**K118 BUCKLE**
Clough Castle, Co. Down.
*c*1200–25.
Broken frame and pin. W 72mm.
Waterman 1954, 141, fig 13.2.

**K119 BUCKLE**
Stonar, Kent.
*c*1225–75.
Frame, pin and plate. Shaped frame and plate both decorated. W 36mm.
Excavated by N Macpherson-Grant.

**K120 BUCKLE**
Newbury, Berkshire.
13th century.
Frame, pin and plate with non-ferrous plating.
Shaped pin rest on frame; shaped end to plate.
W 33mm.

Goodall 1997, fig 22, no. 45.

**K121 BUCKLE**
Waltham Abbey, Essex.
Probably 13th century.
Frame and pin. W 33mm.
Excavated by P J Huggins. From Romeland.

**K122 BUCKLE**
Lyveden, Northamptonshire.
*c*1400.
Frame with sheet iron cylinder. W 44mm.
Steane and Bryant 1975, 59, fig 15.c1.

**K123 BUCKLE**
Strood, Kent.
Probably early 14th century.
Frame and pin. W 37mm.
Rigold 1965, 125, fig 12.7.

**K124 BUCKLE**
Wintringham, Cambridgeshire.
Around early 14th century.
Frame. W 73mm.
Goodall 1977a, 258, fig 46.85.

**K125 BUCKLE**
The Hamel, Oxford.
Mid 14th century.
Buckle, pin and incomplete plate with shaped end. W 33mm.
Goodall 1980d, fig 31, no. 70.

**K126 BUCKLE**
Winchester, Hampshire.
15th century.
Frame, pin and plate with non-ferrous plating.
Shaped pin rest on frame, plate shaped, decorated and held by two rivets. W 32mm.
Goodall 1990-12, fig 137.1300.

**K127 BUCKLE**
Thuxton, Norfolk.

Site: 12th–14th century.
Frame. W 52mm.
Excavated by L A S Butler.

**K128 BUCKLE**
Goltho, Lincolnshire.
Late 14th, early 15th century.
Frame. W 38mm.
Goodall 1975a, 89, fig 41.110.

**K129 BUCKLE**
Kings Langley, Hertfordshire.
1291–92 to late 14th or first half 15th century.
Frame. W 54mm.
Neal 1973, 56, fig XV.61.

**K130 BUCKLE**
Bramber Castle, West Sussex.
?15th century.
Frame and pin. W 47mm.
Barton and Holden 1977, 66, fig 20.10.

**K131 BUCKLE**
Portchester Castle, Hampshire.
Medieval to 15th century.
Frame and pin. W 59mm.
Hinton 1977, 201, fig 108.53, scale 2:3, not 1:3.

**K132 BUCKLE**
Hen Caerwys, Clwyd.
*c*1450 –1520.
Frame and pin. W 34mm.
Excavated by G B Leach.

**K133 BUCKLE**
London. Late 15th–early 16th century.
Frame and pin. W 47mm.
Excavated by F C Willmot.

**K134 BUCKLE**
London.
Late 15th–early 16th century.

Frame with sheet iron cylinder. W 43mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**K135 BUCKLE**
Somerby, Lincolnshire.
15th–mid 16th century.
Frame and pin. W 24mm.
Mynard 1969, 81, fig 11.JW34.

**K136 BUCKLE**
Somerby, Lincolnshire.
15th–16th century.
Frame. W 34mm.
Mynard 1969, 81, fig 11.IW35.

**K137 BUCKLE**
Cambokeels, Durham.
Later 14th to early 16th century.
Frame and pin, the frame with sheet iron cylinder. W 30mm.
Hildyard and Charlton 1947, 194, fig 3.8.

**K138 BUCKLE**
Rochester, Kent.
16th century.
Frame and pin. W 42mm.
Harrison and Flight 1968, 100, fig 18.5.

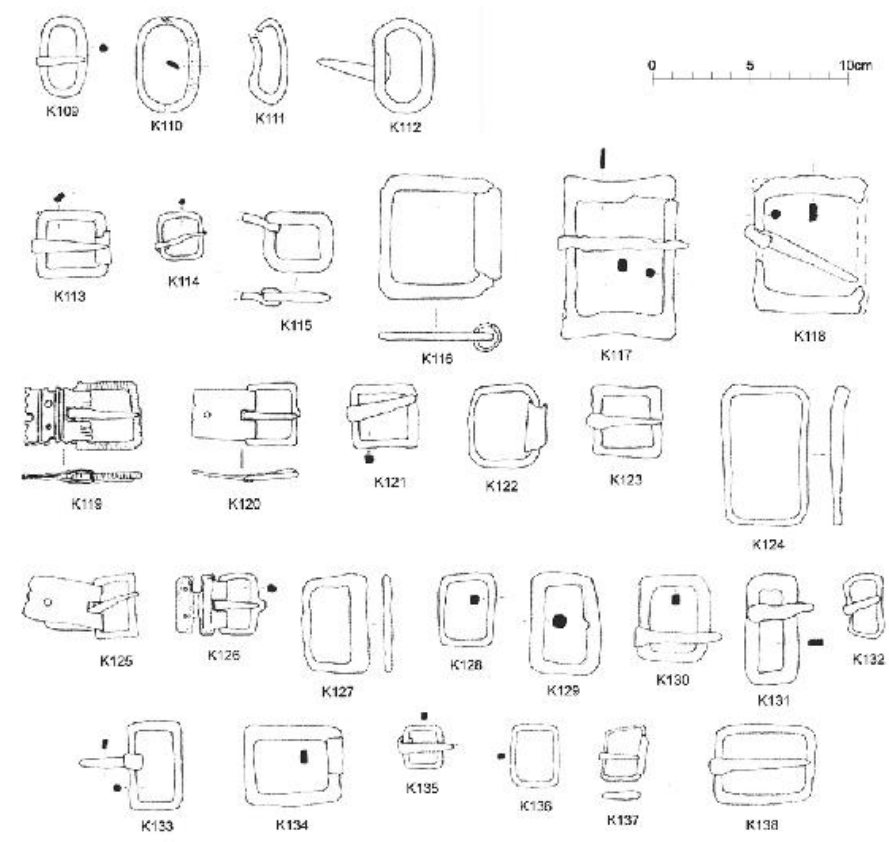



FIGURE 12.6
*Buckles*

**K139 BUCKLE**
Winchester, Hampshire.
?15th century.
Frame. W 38mm.
Goodall 1990-12, fig 139.1312.

**K140 BUCKLE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Frame. W 50mm.
Macdonald and Laing 1974–75, 146, fig 10.7.

**K141 BUCKLE**
London.
Around late 14th to early 15th century.

Frame and pin with decorative grooves.
W 83mm.
Blurton 1977, 88, fig 31.605.

**K142 BUCKLE**
Sawtry, Cambridgeshire.
15th–early 16th century.
Frame and broken pin. W 50mm.
Moorhouse 1971b, 85, fig 4.3.

**K143 BUCKLE**
East Haddlesey, North Yorkshire.
15th–early 16th century.
Frame and pin, the pin resting against a broken sheet iron cylinder. W 45mm.
Goodall 1973b, 93, fig 37.22.

**K144 BUCKLE**
Sawtry, Cambridgeshire.
15th–early 16th century.
Broken frame and pin, the frame with sheet iron cylinder. W 50mm.
Moorhouse 1971b, 85, fig 4.2.

**K145 BUCKLE**
Somerby, Lincolnshire.
15th–mid 16th century.
Frame. W 40mm.
Mynard 1969, 82, fig 11.IW37.

**K146 BUCKLE**
Cambokeels, Durham.
Later 14th to early 16th century.
Frame and pin. W 45mm.
Hildyard 1949, 195.

**K147 BUCKLE**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Frame with sheet iron cylinder and broken pin.
W 47mm.
Goodall 1979c, 132, fig 22.93.

**K148 BUCKLE**
Staines, Surrey.
Medieval, to 15th century.
Frame and pin, the frame with sheet iron cylinder. W 46mm.
Barker 1976, 124, fig 26.31.

**K149 BUCKLE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Frame with sheet iron cylinder. W 45mm.
Goodall 1988, fig 81.103; Borenius and Charlton 1936.

**K150 BUCKLE**
Weoley Castle, Birmingham, West Midlands.
Site: *c*1080–1600.
Frame with sheet iron cylinder and pin.
W 43mm.
Birmingham City Museum, WC 332. Taylor 1974. For site see Oswald 1962.

**Not illustrated:**
**K151** Lyveden, Northamptonshire. 1475-1500. Frame and pin. W 47mm, L 56mm.
Steane and Bryant 1975, 128, fig 48.108.
**K152** West Hartburn, Durham. Medieval to later 16th century. Frame and pin. W 38mm, L 52mm. Still and Pallister 1967, 146, fig 4.3.
**K153** Clarendon Palace, Wiltshire. Site: *c*1072 to later 15th century. Broken frame with sheet iron cylinder. W 43mm, L 53mm. Salisbury and South Wiltshire Museum, Salisbury, 47/1957.

**K154 BUCKLE**
Glottenham, East Sussex.
Mid to late 13th century.
Broken frame. W 62mm.
Excavated by D Martin.

**K155 BUCKLE**
Rhuddlan, Clwyd.
*c*1280.
Frame. W 68mm.
Goodall 1994, fig 17.7, no. 102.

**K156 BUCKLE**

Brandon Castle, Warwickshire.
13th century.
Decorated frame. W 71mm.
Chatwin 1955, 81, fig 11.12. Herbert Art Gallery and Museum, Coventry.

**K157 BUCKLE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 13th century.
Frame with sheet iron cylinder. W 82mm.
Goodall 1988, fig 81.105; Borenius and Charlton 1936.

**K158 BUCKLE**
Winchester, Hampshire.
15th century.
Frame with non-ferrous plating. W 70mm.
Goodall 1990-12, fig 139.1315.

**K159 BUCKLE**
Durrance Moat, Warwickshire.
Site: *c*1200–1450.
Frame. W 73mm.
Birmingham City Museum. For site see Oswald and Taylor 1964.

**K160 BUCKLE**
Castle Neroche, Somerset.
Late 11th–12th century.
Frame. W 79mm.
Gray 1903, 45, pl III.S.

**K161 BUCKLE**
Southampton, Hampshire.
11th–12th century.
Frame with non-ferrous plating. W 43mm.
Harvey 1975b, 277, fig 250.1973.

**K162 BUCKLE**
Goltho Manor, Lincolnshire.
*c*1100–50.
Frame and pin with non-ferrous plating.
Decorative grooves on frame. W 75mm.
Goodall 1987, fig 159.144.

**K163 BUCKLE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Distorted frame and pin. W 69mm.
Goodall 1977f, 48, iron object fig 2.44.

**K164 BUCKLE**
Ipswich, Suffolk.
12th century.
Frame and broken pin. W 78mm.
West 1963, 274, fig 54.11.

**K165 BUCKLE**
Loughor Castle, West Glamorgan.
Site: *c*1106 to late 13th century.
Broken frame. W 67mm.
Excavated by J M Lewis.

**K166 BUCKLE**
Winchester, Hampshire.
12th–13th century.
Frame and pin. W 75mm.
Goodall 1990-12, fig 138.1304.

**K167 BUCKLE**
Dyserth Castle, Clwyd.
Site: *c*1241–63.
Frame and pin. W 90mm.
Glenn 1915, fig 90.

**K168 BUCKLE**
Dyserth Castle, Clwyd.
Site: 1241–63.
Broken frame. W 98mm.
Glenn 1915.

**K169 BUCKLE**
London.
13th century.
Frame and pin with decorative grooves.
W 75mm.
Wood *et al* 1975, 260, fig 3.55.

**K170 BUCKLE**
Brandon Castle, Warwickshire.
13th century.
Frame and pin. W 79mm.
Chatwin 1955, 81, fig 11.14.

**K171 BUCKLE**
Winchester, Hampshire.
Late 13th century.
Frame and pin. W 85mm.
Goodall 1990-12, fig 138.1303.

**K172 BUCKLE**
Bramber Castle, West Sussex.
Late 13th–14th century.
Frame and pin. W 74mm.
Barton and Holden 1977, 63, fig 19.15.

**K173 BUCKLE**
Gomeldon, Wiltshire.
13th–14th century.
Frame and pin. W 60mm.
Musty and Algar 1986.

**K174 BUCKLE**
Glottenham, East Sussex.
Early 14th century.
Frame and broken pin. W 54mm.
Excavated by D Martin.

**K175 BUCKLE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Frame and pin. W 65mm.
Macdonald and Laing 1974–75, 146, fig 10.5.

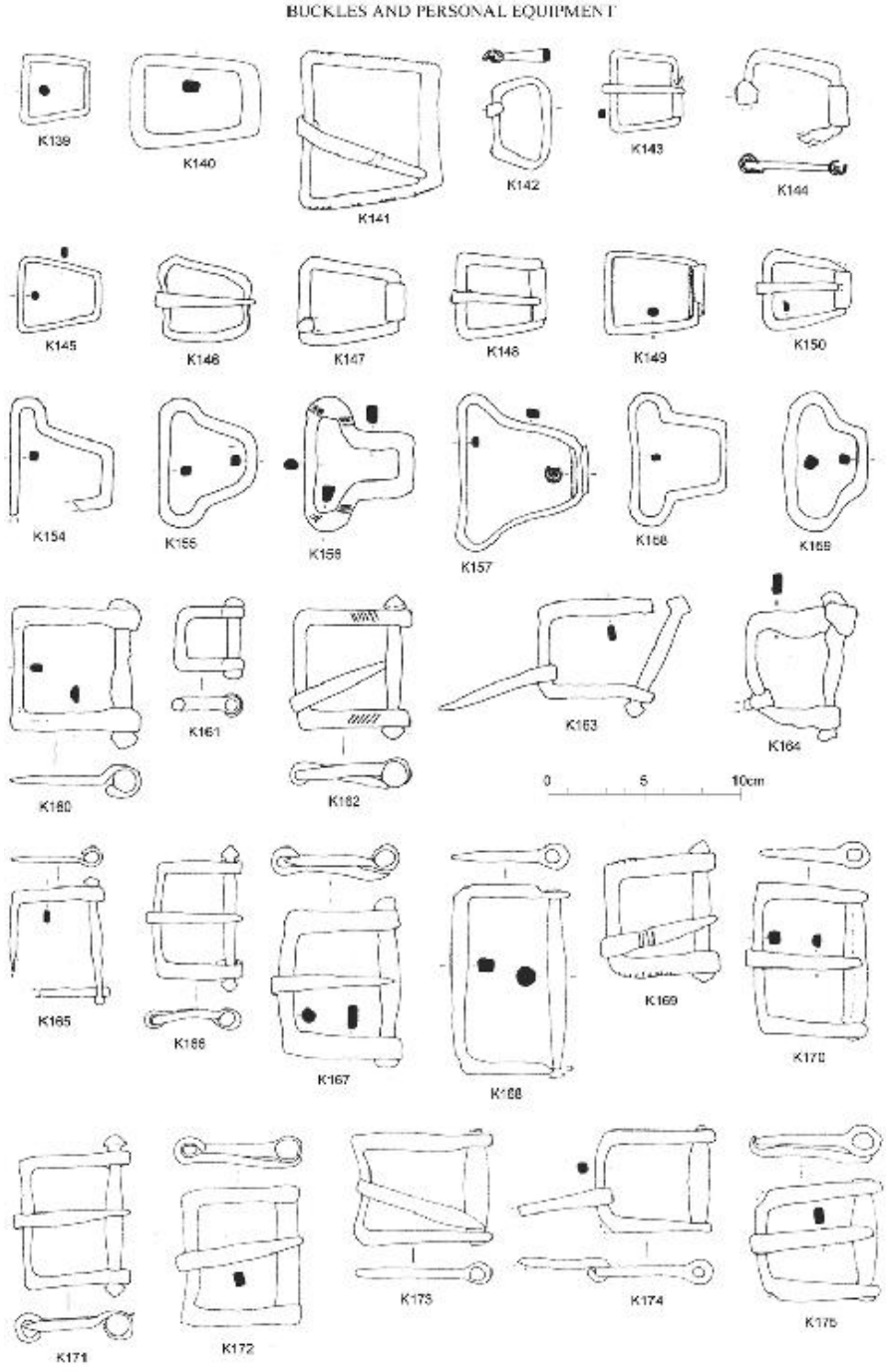



FIGURE 12.7
*Buckles*

**K176 BUCKLE**

Goltho, Lincolnshire.
Late 14th, early 15th century.
Frame and pin. W 46mm.
Goodall 1975a, 89, fig 41.121.

**K177 BUCKLE**
Alsted, Surrey.
*c*1250–1405.
Frame. W 58mm.
Goodall 1976a, 56, fig 36.52.

**K178 BUCKLE**
Wallingstones, Hereford and Worcester.
1300–25 to 1500.
Frame. W 65mm.
Bridgewater 1970–2, 104, no. 70.

**K179 BUCKLE**
Wallingstones, Hereford and Worcester.
Post-1500 destruction layer with residual objects. Site occupied from *c*1200.
Broken frame. W 80mm.
Bridgewater 1970–72, 104, no. 93.

**K180 BUCKLE**
Writtle, Essex.
*c*1425–1521.
Frame and pin. W 71mm.
Rahtz 1969b, 85, fig 47.54.

**K181 BUCKLE**
London.
Late 15th–early 16th century.
Frame and pin. W 77mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**K182 BUCKLE**
Cambokeels, Durham.
Later 14th–early 16th century.
Frame damaged. W 64mm.
Hildyard 1949, 195.

**Not illustrated:**

**K183** Bramber Castle, West Sussex.
1075–1180. Frame and pin. W 77mm, L 66mm. Barton and Holden 1977, 63, fig 19.15.

**K184** Woodperry, Oxfordshire. 12th to 14th century pottery. Frame and pin. W 86mm, L 71mm. Ashmolean Museum, Oxford, 1873.63.

**K185** Seacourt, Oxfordshire. Mid to late 12th to late 14th century. Frame and pin. W 81mm, L 61mm. Biddle 1961–62, 179, fig 30.14, scale 1:4, not 1:3.

**K186** Staxton, North Yorkshire. Later 12th to mid 15th century. Frame and pin. W 68mm, L 53mm. Brewster 1952, 12, fig IX.4

**K187** Huish, Wiltshire. 12th–15th century. Frame and pin. W 69mm, L 61mm. Shortt 1972, 120, fig 5.36

**K188** Hadleigh Castle, Essex. 16th century.
Frame and pin. W 75mm, L 72mm. Goodall 1975c, 142, fig 28.352.

**K189 BUCKLE**
Goltho Manor, Lincolnshire.
*c*1100–50.
Frame and pin. w 67mm.
Goodall 1987, fig 159.143.

**K190 BUCKLE**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Frame and pin. W 44mm.
Goodall 2002, fig 7.8, no. 92.

**K191 BUCKLE**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Frame and pin. W 42mm.
Goodall 2002, fig 7.8, no. 91.

**K192 BUCKLE**
Northampton.
*c*1250 to end 14th century.
Frame with sheet iron cylinder and pin. W 92mm.
Goodall *et al* 1979, 273, fig 120.90.

**K193 BUCKLE**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.

Frame and pin. W66mm.
O'Neil 1944–45, 41, pl IX.16.

**K194 BUCKLE**
Theodoric's Hermitage, Margam, West Glamorgan.
Site: 13th–15th century.
Frame. W71mm.
National Museum of Wales, Cardiff, 49.
140.6.

**K195 BUCKLE**
Hen Caerwys, Clwyd.
*c*1450–1520.
Frame and pin. Non-ferrous plating.
W 74mm.
Excavated by G B Leach.

**K196 BUCKLE**
North Elmham Park, Norfolk.
*c*1150 –*c*1600.
Incomplete frame. W 63mm.
Goodall 1980a, 516, fig 267.124.

**K197 BUCKLE**
Old Sarum, Wiltshire.
Possible 12th–13th century.
Frame and pin. W 91mm.
Salisbury and South Wiltshire Museum, Salisbury, 8/1932, O.S.C106.

**K198 BUCKLE**
Wintringham, Cambridgeshire.
Late 13th century.
Broken frame with non-ferrous plating.
W 92mm.
Goodall 1977a, 258, fig 46.83.

**K199 BUCKLE**
Hangleton, West Sussex.
Near 13th-century building.
Broken frame. W 118mm.
Holden 1963, 171, fig 37.17.

**K200 BUCKLE**
Netherton, Hampshire.
Late 13th–early 14th century.
Frame and pin. W 102mm.
Goodall 1990-28, fig 9.9 no. 485.

**K201 BUCKLE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Broken frame. W 96mm.
Macdonald and Laing 1974–75, 146, fig 10.8.

**K202 BUCKLE**
Woodperry, Oxfordshire.
12th to 14th century pottery.
Frame and pin. W 132mm, L 68mm.
Ashmolean museum, Oxford, 1873.62. For site see Wilson 1846.

**K203 BUCKLE**
Winchester, Hampshire.
16th century.
Frame. W 101mm.
Goodall 1990-12, fig 139.1316.

**K204 BUCKLE BAR**
Castle Acre Castle, Norfolk.
1140s deposit with derived material. Site founded soon after 1066.
Complete. L 74mm.
Goodall 1982, fig 41, no. 118.

**K205 BUCKLE BAR**
South Witham, Lincolnshire.
1137–85 to *c*1220.
Complete. L 76mm.
Goodall 2002, fig 7.8, no. 93.

**K206 BUCKLE BAR**
Upton, Gloucestershire.
Late 13th to late 14th century.
Complete. L 72mm.
Hilton and Rahtz 1966, 121, fig 14.30.

**K207 BUCKLE BAR**
London.
?Late 13th to mid 14th century.
Complete. L 74mm.
Henig 1974, 195, fig 39.81.

**K208 BUCKLE BAR**
Alsted, Surrey.
*c*1250–1405.
Complete. L 70mm.
Goodall 1976a, 56, fig 36.53.

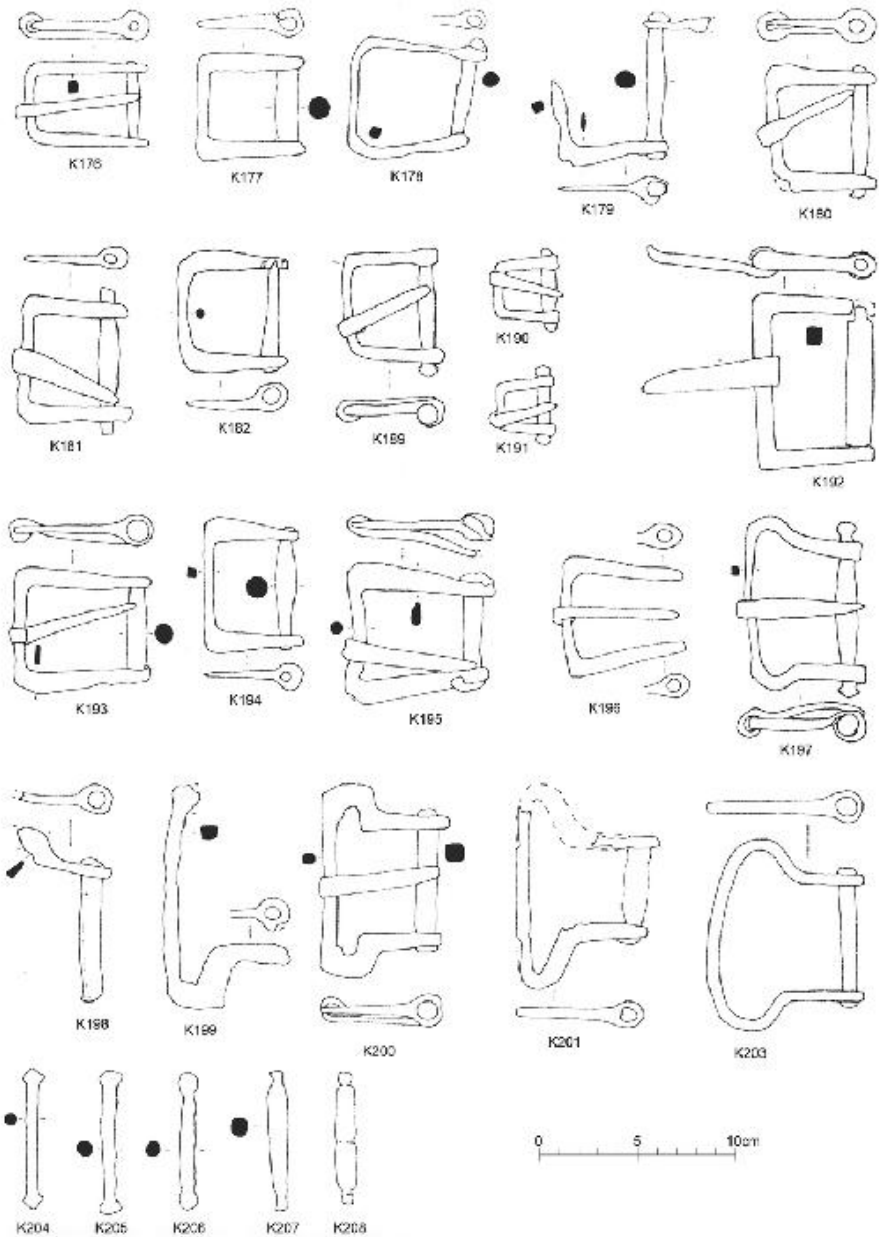



FIGURE 12.8
*Buckles*

**K209 BUCKLE**
Wintringham, Cambridgeshire.
Second half 13th century.

Frame and pin. W 39mm.
Goodall 1977a, 258, fig 46.82.

**K210 BUCKLE**
Lyveden, Northamptonshire.
1350–1450.
Decorated frame, angled in side view, with pin.
W 39mm.
Steane and Bryant 1975, 129, fig 48.136.

**K211 BUCKLE**
Baginton, Warwickshire.
Late 14th–early 15th century.
Frame, pin and plate. W 72mm.
Wilkins 1975, 126, fig 8.17.

**K212 BUCKLE**
Grenstein, Norfolk.
Late 14th–15th century.
Frame. W 30mm.
Goodall 1980c, fig 82, no. 87.

**K213 BUCKLE**
Lyveden, Northamptonshire.
1475–1500.
Broken, angled frame with pin. W 22mm.
Steane and Bryant 1975, 129, fig 48.137.

**K214 BUCKLE**
Winchester, Hampshire.
15th–16th century.
Frame slightly angled in side view. Pin rests against sheet metal cylinder. W 16mm.
Goodall 1990-12, fig 140.1332.

**K215 BUCKLE**
Thelsford Priory, Warwickshire.
16th century destruction deposit.
Frame and pin with broken attachment plate round central bar. W 22mm.
Excavated by Mrs M Gray.

**K216 BUCKLE**

Grafton Regis, Northamptonshire.
13th–15th century.
Frame and plate with non-ferrous plating.
W 22mm.
Excavated by Miss C Mahany.

**K217 BUCKLE**
Glenluce, Dumfries and Galloway.
Late 13th–early 14th century.
Frame. W 34mm.
Jope and Jope 1959, 269, fig 94.9.

**K218 BUCKLE**
Brandon Castle, Warwickshire.
1226–66.
Broken frame and pin. D 30mm.
Chatwin 1955, 83, pl 8a.

**K219 BUCKLE**
Netherton, Hampshire.
Late 13th century.
Frame and pin. D 13mm.
Goodall 1990-28, fig 9.9 no. 493.

**K220 BUCKLE**
London.
?Late 13th–early 14th century.
Frame and pin in part of projecting leather strap from shoe upper. D 13mm.
Jones 1975, 161, fig 28.97.

**K221 BUCKLE**
London.
Late 13th–mid 14th century.
Broken iron frame wrapped round with fine copper-alloy wire. D 30mm.
Henig 1974, 196, fig 40.134.

**K222 BUCKLE**
Oakham Castle, Leicestershire.
13th–14th century.
Large leather front upper from shoe (part drawn) with two straps, one retaining tinned buckle and pin. Buckle D 12mm.

Gathercole 1958, 33, fig 9.9.

**K223 BUCKLE**
Riplingham, Humberside.
Second half 14th century.
Frame and pin, possibly with non-ferrous plating. D 34mm.
Wacher 1963–66, 655, fig 21.22.

**K224 BUCKLE**
Lyveden, Northamptonshire.
1350–1450.
Frame and pin. D 12mm.
Steane and Bryant 1975, 118, fig 45.7.

**K225 BUCKLE**
Grenstein, Norfolk.
Late 14th to 15th century.
Frame and pin. D 14mm.
Goodall 1980c, fig 82, no. 83.

**K226 BUCKLE**
Thelsford Priory, Warwickshire.
14th–15th century.
Frame and pin. D 15mm.
Excavated by Mrs M Gray.

**K227 BUCKLE**
Somerby, Lincolnshire.
11th–15th century.
Frame and pin. D 17mm.
mynard 1969, 82, fig 11.IW 44.

**K228 BUCKLE**
Faxton, Northamptonshire.
Site: 12th–15th century.
Frame and pin. D 21mm.
Excavated by L A S Butler.

**K229 BUCKLE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Frame and broken pin. D 20mm.

Goodall 1979a, 121, fig 63.78.

**K230 BUCKLE**
Ospringe, Kent.
*c*1483–1550.
Frame and broken pin. D 17mm.
Goodall 1979c, 132, fig 22.91.

**K231 BUCKLE**
St Catharine's Hill, Winchester, Hampshire.
12th century to 1538–40.
Frame and broken pin. D 14mm.
Hawkes *et al* 1930, 246, fig 29.17.

**Not illustrated:**
**K232** London. Late 13th–mid 14th century.
Leather-covered metal (?iron) buckle and pin in end of strap from leather shoe upper. D 3mm. Jones 1975, 161, fig 28.101.

**K233–243** Lyveden, Northamptonshire.
1350–1450. Eleven buckles with pins from Site J.
D 12–15mm. For selection see Steane and Bryant 1975, 118, fig 45.1–6, 8.
**K244–246** Grenstein, norfolk. Late 14th–15th century. Three buckles, two with pins. D 13–15mm. Goodall 1980c.
**K247–250** Wharram Percy, north Yorkshire.
Late 15th–early 16th century. Four buckles, three with pins. D 14–15mm. Goodall 1979a, 121.

**K251 BUCKLE**
Cambokeels, Durham.
Later 14th to early 16th century.
Frame with expanded pin rest and broken, looped attached plate round central bar.
D 32mm.
Hildyard 1949, 195, fig 4.9.

**K252 BUCKLE**
Hen Caerwys, Clwyd.
*c*1450–1520.
Frame with broken, looped attachment round central bar. Pin lost. non-ferrous plating.
D 24mm.

Excavated by G B Leach.

**K253 BUCKLE**
East Haddlesey, North Yorkshire.
15th–early 16th century.
Damaged frame. D 48mm.
Goodall 1973b, 93, fig 37.25.

**K254 BUCKLE**
London.
Late 15th–early 16th century.
Frame. D 53mm.
Excavated by F C Willmot

**K255 BUCKLE**
Bolton, Fangfoss, Humberside.
Early 14th century.
Frame and pin with non-ferrous plating. Frame gently curved in side view. W 16mm.
Goodall 1978b, 143, fig 30.21.

**K256 BUCKLE**
Goltho, Lincolnshire.
14th–early 15th century.
Frame and pin. W 43mm.
Goodall 1975a, 89, fig 41.118.

**K257 BUCKLE**
Wharram Percy, North Yorkshire.
Late 15th–early 16th century.
Frame and pin. W 18mm.
Goodall 1979a, 121, fig 63.77.

**K258 BUCKLE**
Hull, Humberside.
Early to mid 16th century.
Broken frame and pin with non-ferrous plating.
Frame slightly angled in side view. W 25mm.
Goodall 1997b, 65, fig 27.86.

**K259 BUCKLE**
West Hartburn, Durham.

13th–16th century.
Frame and pin. L 22mm.
Still and Pallister 1964, 197, fig 5.15.

**K260 BUCKLE**
West Hartburn, Durham.
13th–16th century.
Frame. W 29mm.
Still and Pallister 1964, 197, fig 5.13.

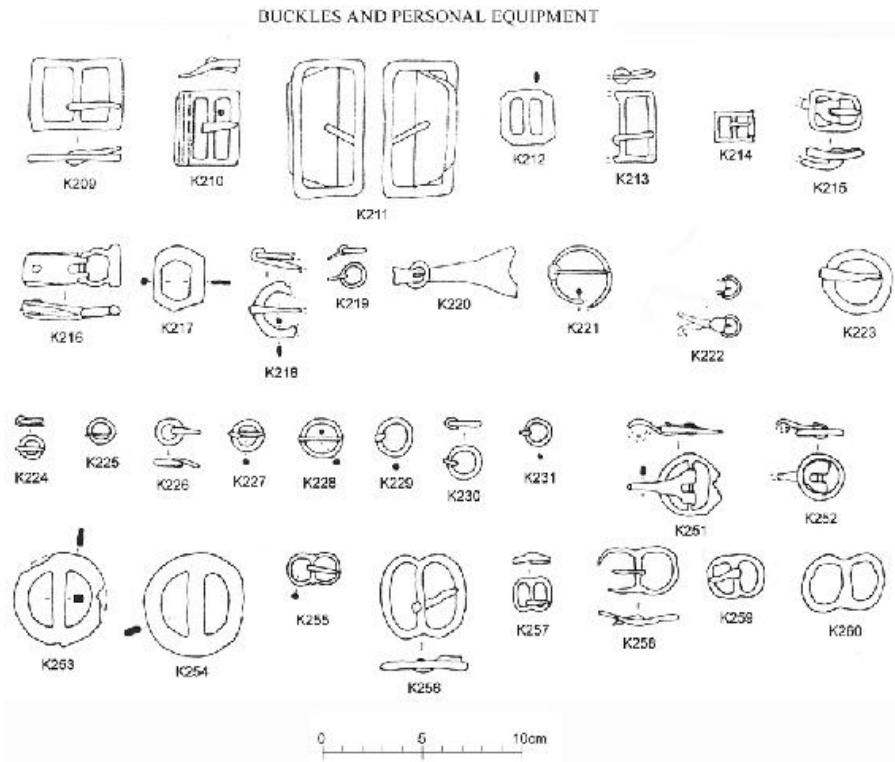



FIGURE 12.9
*Buckles*

**K261 BUCKLE**
Winchester, Hampshire.
1050–1150.
Frame and pin. Decorated neck with broken loop. Non-ferrous plating. W 36mm.
Goodall 1990-12, fig 139.1317.

**K262 BUCKLE**

Winchester, Hampshire.
12th century.
Frame and elongated neck, both broken. Pin lost. W 16mm.
Goodall 1990-12, fig 139.1318.

**K263 BUCKLE**
Seacourt, Oxfordshire.
Mid 13th century.
Frame with looped neck to which side-ring attached. W 19mm.
Biddle 1961–62, 180, fig 30.23, scale 1:4, not 1:3.

**K264 BUCKLE**
Winchester, Hampshire.
Mid to late 13th century.
Frame with elongated neck and pin both broken. Non-ferrous plating. W 17mm.
Goodall 1990-12, fig 139.1320.

**K265 BUCKLE**
Seacourt, Oxfordshire.
14th century.
Broken frame with looped neck. Possible non-ferrous plating. W 25mm.
Biddle 1961–62, 180, fig 30.22, scale 1:4, not 1:3.

**K266 BUCKLE**
Criccieth Castle, Gwynedd.
Site: *c*1230–1404.
Frame with elongated, looped neck and pin.
L 43mm.
O'Neil 1944–45.

**K267 BUCKLE**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Buckle with looped, elongated neck and broken pin. W 37mm.
Butler 1974, 97, fig 8.23.

**K268 BUCKLE**
Winchester, Hampshire.
Mid to late 13th century.
Frame with elongated, looped neck and pin set on looped strap. W 37mm.
Goodall 1990-12, fig 139.1319.

**K269 BUCKLE**
Clarendon Palace, Wiltshire.
Site: *c*1072 to later 15th century.
Frame with elongated, looped neck and pin.
L 106mm.
Goodall 1988, fig 81.108; Borenius and Charlton 1936.

**K270 BUCKLE**
Glastonbury Tor, Somerset.
12th–16th century.
Frame with broken, elongated looped neck and pin. L 78mm.
Rahtz 1970, 53, fig 12.10.

**K271 BUCKLE**
Writtle, Essex.
*c*1425–1521 and later.
Frame with elongated, looped neck and pin.
L 80mm.
Rahtz 1969b, 85, fig 47.56.

**K272 BUCKLE**
Thuxton, Norfolk.
Site: 12th–14th century.
Frame with integral plate. Incomplete.
L 37mm.
Excavated by L A S Butler.

**K273 BUCKLE**
Stonar, Kent.
*c*1275–1385.
Frame with integral plate and broken pin.
Non-ferrous plating. W 19mm.
Excavated by N Macpherson-Grant.

**K274 BUCKLE**
East Haddlesey, North Yorkshire.
15th–early 16th century.
Frame with copper-alloy pin and broken integral plate. Non-ferrous plating. W 27mm.
Goodall 1973b, 93, fig 37.23.

**K275 BUCKLE PIN**

Goltho Manor, Lincolnshire.
*c*1100–50.
Loop broken. L 60mm.
Goodall 1987, fig 159.151.

**K276 BUCKLE PIN**
The Hamel, Oxford.
Early to mid 13th century.
Loop broken. L 55mm.
Goodall 1980d, fig 31, no. 72.

**K277 BUCKLE PIN**
Oakley, Hampshire.
Mid 13th century.
Grooved decoration and non-ferrous plating.
L 67mm.
Excavated by S Moorhouse.

**K278 BUCKLE PIN**
Winchester, Hampshire.
Mid 13th century.
Complete. L 53mm.
Goodall 1990-12, fig 141.1338.

**K279 BUCKLE PLATE**
The Hamel, Oxford.
Late 12th–early 13th century.
Complete. W 37mm.
Goodall 1980d, fig 31, no. 73.

**K280 BUCKLE PLATE**
King's Lynn, Norfolk.
*c*1280–1350.
Broken plate. W 15mm.
Goodall and Carter 1977, 295, fig 134.49.

**K281 BUCKLE PLATE**
The Hamel, Oxford.
Mid to late 15th century.
Broken plate with punched decoration and non-ferrous plating. W 18mm.
Goodall 1980d, fig 31, no. 74.

**K282 BUCKLE**

Winchester, Hampshire.

Late 15th century.

Frame and pin broken. Buckle plates linked by side sheets form rectangular case.

W 25mm.

Goodall 1990-12, fig 141.1343.

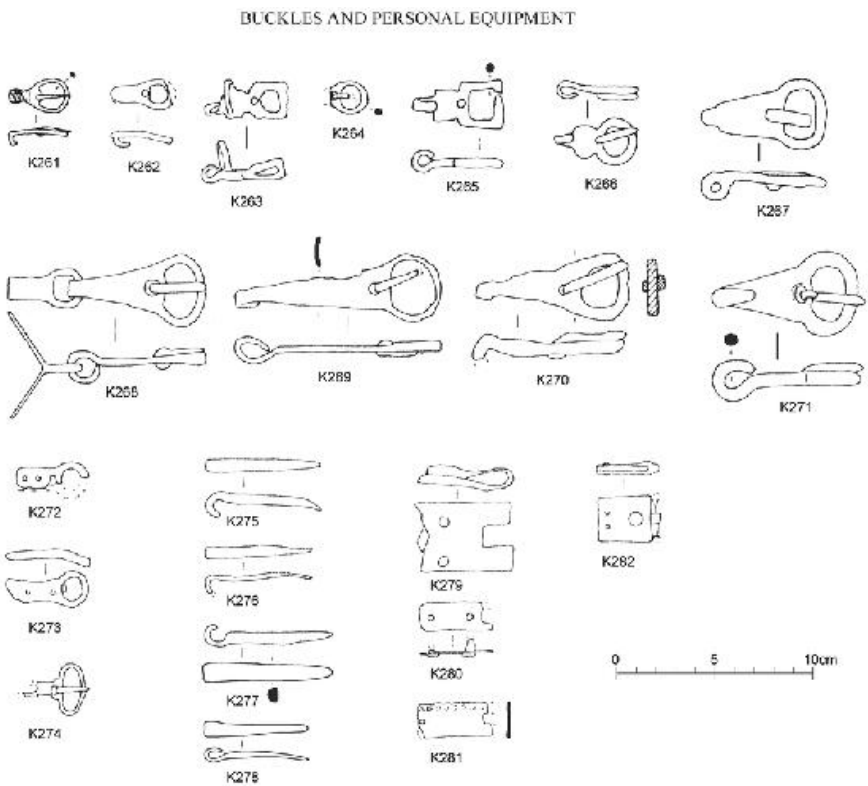



FIGURE 12.10
*Buckles*

**K283 STRAP-END**

Thuxton, Norfolk.

Site: 12th–14th century.

Strap-end with shaped terminal and non-ferrous plating. L 31mm.

Excavated by L A S Butler.

**K284 STRAP-END**

Oxford.

*c*1325–*c*1400.

Plain strap-end with non-ferrous plating.

L 29mm.
Goodall 1977e, 146, fig 28.53.

**K285 STRAP-END**
Lyveden, Northamptonshire.
Early 15th century.
Plain strap-end with single,?iron rivet.
L 17mm.
Steane and Bryant 1975, 139, fig 52.242.

**K286 BELT SLIDE**
Winchester, Hampshire.
Early 13th century.
Rectangular belt slide. L 75mm.
Goodall 1990-12, fig 334.3901.

**K287 BELT SLIDE**
Clough Castle, Co. Down.
*c*1250 to early 14th century.
Curved sides, shouldered ends. L 65mm.
Waterman 1954, 141, fig 13.5.

**K288 BELT SLIDE**
Beckery Chapel, Glastonbury, Somerset.
Later 13th to?15th century.
Curved-sided belt slide with indented ends.
L 97mm.
Rahtz and Hirst 1974, 61, fig 22.16.

**K289 BELT HOOK**
Salisbury, Wiltshire.
After 1227.
Rectangular belt loop with plain upright arm. L 76mm.
Salisbury and South Wiltshire Museum,
Salisbury, Drainage Collection.

**K290 BELT HOOK**
Salisbury, Wiltshire.
After 1227.
Rectangular belt loop with shaped and upright arm. L 65mm.
Salisbury and South Wiltshire Museum,
Salisbury, Drainage Collection.

**K291 BELT HOOK**
Wharram Percy, North Yorkshire.
Early 16th to 20th century.
Rectangular belt loop above perforation.
Shaped and moulded upright arm. L 64mm.
Goodall 1979a, 123, fig 65.116.

**K292 PURSE FRAME**
King's Lynn, Norfolk.
*c*1350–1500.
Broken frame with suspension loop.
Non-ferrous plating. W 113mm.
Goodall and Carter 1977, 295, fig 134.48.

**K293 PURSE FRAME**
Somerby, Lincolnshire.
Destruction levels of 15th to mid 16th-century occupation.
Broken frame with suspension loop.
W 192mm.
Mynard 1969, 82, fig 11.IW48.

**K294 PURSE FRAME**
Portchester Castle, Hampshire.
*c*1500–21.
Oval purse frame with suspension loop.
W 229mm.
Hinton 1977, 198, fig 106.39.

**K295 PURSE FRAME**
Ospringe, Kent.
*c*1483–1550.
Near complete bar with suspension loop mount decorated on one face.
Broken pendent loop. W 145mm.
Goodall 1979c, 132, fig 22.90.

**K296 PURSE BAR**
London.
Late 15th–early 16th century.
Near complete bar with fragment of pendent frame. Suspension loop lost.
L 147mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**K297 PURSE BAR**
Waltham Abbey, Essex.
12th–13th century, but?16th century, from floor above.
Complete bar, suspension loop and pendent frames lost. L 143mm.
Goodall 1973a, 173, fig 12.43.

**K298 PURSE FRAME FITTING**
Thuxton, Norfolk.
Site: 12th–14th century.
Decorated and shaped pin formerly inset in iron purse bar. L 37mm.
Excavated by L A S Butler.

**K299 SCABBARD MOUNT**
Hambleton moat, Lincolnshire.
1250–1400.
Simply shaped scabbard mount found with 260mm long tip of single edged sword or knife-dagger. W 91mm.
Butler 1963, 67, fig 14.12–13.

**K300 SCABBARD CHAPE**
Norht Elmham Park, Norfolk.
*c*1150–*c*1600.
Incomplete chape with knobbed terminal.
L 148mm.
Goodall 1980a, 516, fig 267.129.

**K301 JEW'S HARP**
Woodperry, Oxfordshire.
12th to 14th century pottery.
Reed distorted and broken. L 65mm.
Ashmolean museum, Oxford, 1873.97. For site see Wilson 1846.

**K302 JEW'S HARP**
London.
Late 13th–mid 14th century.
Distorted and broken reed. L 67mm.
Henig 1974, 195, fig 39.83.

**K303 JEW'S HARP**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.

Reed broken. L 50mm.
Goodall 1979a, 121, fig 63.83.

**K304 JEW'S HARP**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Distorted and incomplete frame, reed lost.
L 35mm.
Goodall 1979a, 121, SF 13083.

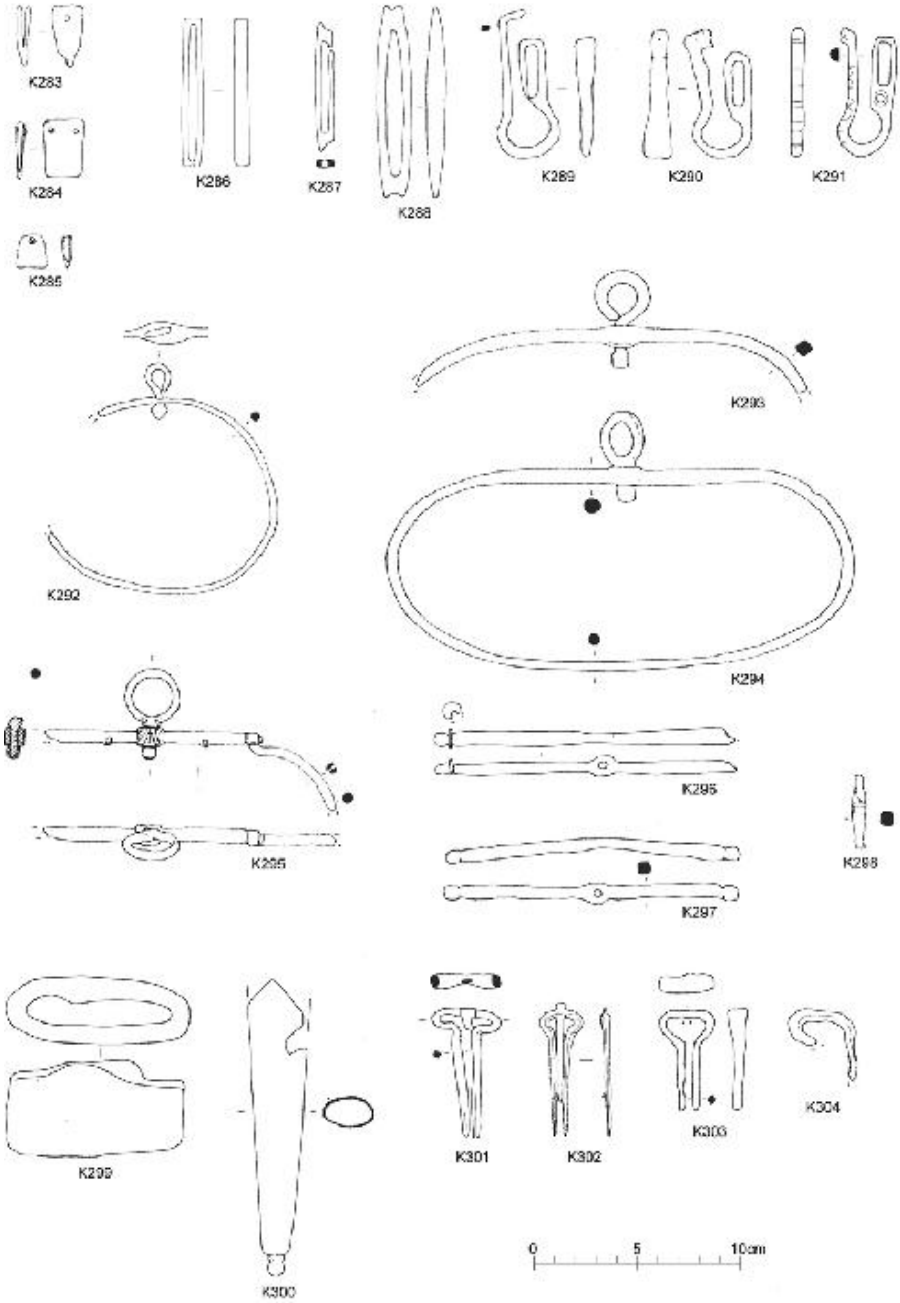



FIGURE 12.11

*Strap-ends, belt slides, belt hooks, purse frames, scabbard mount, scabbard chape, and jew's harps*

# 13
# Horse Equipment

## 13.1 Horseshoes

Horseshoes have attracted the attention of many writers, but in the absence of securely dated examples most of their texts are at best merely speculation. Ward Perkins' study (1967, 112–117) is the first to be based on dated horseshoes, although most of the later medieval examples are drawn from Continental sites.

Horseshoes of pre-Conquest date are known from sites including Ipswich, Cheddar, Goltho Manor and Winchester, and they are of identical form to the early medieval type which has countersunk nail-holes whose punching commonly produced a sinuous or wavy edge. **L1–9** are examples of this type, most with up-turned or thickened ends known as calkins. The waviness of the edge varies, and depends largely on the breadth and thickness of the iron bar from which the horseshoe is forged, and on the position of the nail-holes within it. **L3** and **L6**, for example, have only slightly sinuous edges in comparison with **L1–2**. Many examples of this type of horseshoe are forged from comparatively narrow bar iron, and they commonly have a U-shaped inner profile. **L4** is unusual, its one broad and other narrow arm implying that it is a surgical horseshoe. These early medieval horseshoes were normally used with fiddle-key horseshoe nails of Type A (see below).

The transition to the later type of medieval horseshoe took place during the 13th century. **L10–14** all have countersunk nail-holes, like the earlier horseshoes, but they are set within broader arms which consequently have a more or less plain outline. **L10** and **L14**, in contrast to the earlier horseshoes, have nails of Type B (see below) which were introduced during the 13th century. These intermediate horseshoes resemble some earlier medieval specimens such as **L6**, but these are atypical at their date.

The later medieval horseshoes, typified by **L15–27**, have a plain edge and rectangular nail-holes, and are generally of broader iron than preceding horseshoes. The inner profile is sometimes U-shaped, but as commonly V-shaped, and fewer arms have calkins. These shoes were fitted with nails of Types B–D.

## 13.2 Oxshoes

The bailiff's accounts of the Manor of Dorking in the time of Richard II (quoted in Dunning 1932, 291–292) include the entry 'the forefeet of Oxen used in plowing, and heifers in harrowing, were shod, at 3d each'. The cloven feet of oxen were each shod with pairs of shoes which characteristically have clips, present on **L29** and **L31**, but missing on **L30** and **L32**. Nail-holes on these oxshoes are more closely spaced than they are on horseshoes.

## 13.3 Horseshoe and Oxshoe Nails

Medieval horseshoe nails (Figure 13.1), some probably also used with oxshoes, are of four main types (A–D). This classification follows that proposed for horseshoe nails from the forge at Waltham Abbey, Essex (Goodall 1973a, 173–175, fig 13A–D), and other significant groups include those from Seacourt, Oxfordshire (Biddle 1961– 62, 176), Bramber Castle, West Sussex (Barton and Holden 1977, 64, fig 20) and Ospringe, Kent (Mold 1979, 150–152, fig 30A–C).

### Type A

Fiddle-key nails with head no thicker in side view than the shank.

Nails of this type were used with horseshoes with countersunk nail-holes, the base of the head set in the countersinking. Complete nails either have semicircular or more rectangular-shaped heads, both of which can be worn down to a T-shape. Type A nails occur in 11th to 13th-century contexts, but they also come from some of the 14th century which are not necessarily residual, including the smithing and working area at Bramber Castle, West Sussex (Barton and Holden 1977, 64, fig 20, Nails 1a,b).

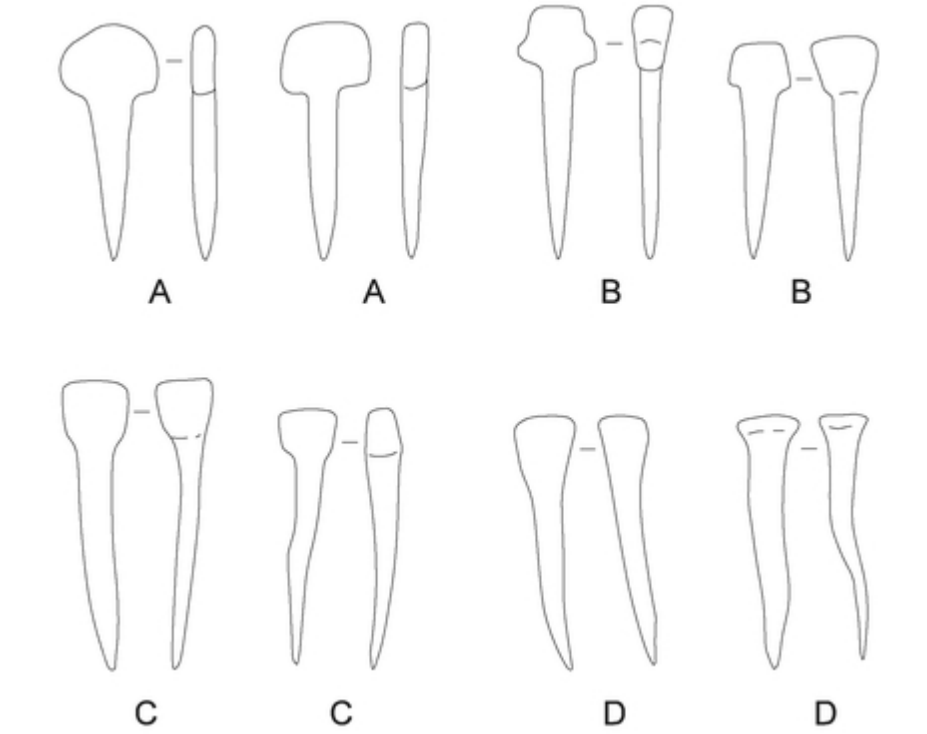



FIGURE 13.1
*Types of medieval horseshoe nail*

## Type B

Nails with trapezoidal heads which expand in side view to a flat top.

Type B nails, some of which have well-defined ears, were used in the 13th and 14th centuries, some in horseshoes such as **L10** and **L14** with countersunk nail-holes, others including **L16** and one from Seacourt, Oxfordshire (Biddle 1961–62, 180, fig 30.19) in horseshoes with plain nail-holes. Nearly all the many individual horseshoe nails from Dyserth Castle, Clwyd, occupied 1241–63 (Glenn 1915, fig 9), are of Type B, as are those from the end of the 13th century at Rhuddlan, Clwyd (Goodall 1994).

## Type C

Nails with shouldered heads, thickened in side view, with near-vertical sides.

Nails of Type C were used with later medieval horseshoes, and examples include those from a late 13th to 14th century context at Hambleton Moat,

Lincolnshire (Butler 1963, 67, fig 14.14) and from one of the late 14th century at Lochmaben Castle, Dumfries and Galloway (Macdonald and Laing 1974–75, 147, fig 10.13). Later examples come from Waltham Abbey, Essex (Goodall 1973a, 174–175, fig 13.C), and horseshoe **L22** retains one.

### Type D

Nails with heads which expand in front and side views to a flat top.

Nails of Type D were used with later medieval horseshoes and oxshoes, although only the smaller examples are suitable for oxshoes. They are probably mainly of 15th to 16th-century date, and horseshoes **L21**, **L24** and **L27** retain them, as well as an incomplete horseshoe from Cambokeels, Durham (Hildyard and Charlton 1947, 193, fig 3.2). Seacourt, Oxfordshire, produced 14th-century nails of the type (Biddle 1961– 62, 176, Type 1.iii).

## 13.4 Curry-Combs

Curry-combs were used in conjunction with body brushes in grooming horses, and the surviving medieval examples have two or three-armed handles riveted to the backs of sheet-iron combs. **L33–36** are all fairly complete and have U-sectioned combs with straight sides and serrated edges. **L33** and **L35** retain two-armed handles, **L36** a three-armed handle, all of which were originally inserted into wooden hand-grips. **L33** retains part of an iron impregnated wooden hand-grip. Curry-comb handles **L37–40** have two arms, **L41–45** three arms, and **L46** is an isolated arm fragment. The two-armed handle is found throughout the medieval period, but the three-armed form comes principally from 14th-century and later contexts.

Horse harness was frequently fitted with jangling bells and pendants, and the loose rings on the arms of **L35** and **L44** are their equivalent on curry-combs.

Post-medieval curry-combs included a type with a flat back-plate to which individual serrated plates were riveted, as well as examples resembling medieval types but with an additional central serrated plate. The currycomb from Rickinghall Superior, Suffolk (Knocker 1961–63) is of this latter type, and is more probably post-medieval than medieval.

# 13.5 Bridle Bits

Snaffle bits and curb bits were used throughout the medieval period, snaffle bits having mouth-pieces and simple looped cheek-pieces, curb bits and complex cheek-pieces with additional loops for extra reins, linking bars and chains. The snaffle bit is the milder bit, the curb bit giving greater control of a horse and being used by competent riders. Ward Perkins comments that the curb bit bulks disproportionately large in contemporary illustration, to the detriment of the snaffle bit (Ward Perkins 1967, 77), but there are now at least a few more dated medieval bits to set against these representations.

## Curb bits

Curb bits **L47–50** compare well with the forms shown in contemporary representations. Earlier medieval illustrations, including the mid 13th-century Maciejowski Bible and early 14th-century Luttrell Psalter show curb bits with more or less plain straight cheek-pieces projecting downwards and linked by transverse bars near the bottom (Ward Perkins 1967, 79, fig 18. 4–6), and **L47–48** are of this type. Both are of 11th-century date, **L47**, which has lost its bottom transverse bar, having a rigid mouth-piece forged in one with the looped and hooked L-shaped cheek-pieces. **L48** is a transverse bottom bar with bossed terminals which were mounted in the bottom ends of cheek-pieces, their corner perforations holding rings or small swivel hooks to which reins were attached.

**L49–50** are examples of the more elaborate later type of curb bit with multiple-looped and perforated cheek-pieces to which reins, straps and chains were attached. The hole in the lower part of one of the cheek-pieces of **L49** retains a link from a chain which held the cheek-pieces together, reins and the headstall straps passed through or were attached to the other loops. **L50** would have been used in a similar way, and the small hole between the two upper loops may originally have held a mount for a bridle boss (see below). These two curb bits are from 15th-century and later contexts, although **L49** resembles one from Tannenberg Castle, Germany, apparently destroyed in 1399 (Ward Perkins 1967, 79, fig 18.2).

## Snaffle bits

The medieval snaffle bit, like earlier and later examples consisted of a mouth-piece with simple cheek-pieces at either end to which reins and the headstall were attached. The classification of snaffle bit cheek-pieces into Type A–E (Figure 13.2) proposed by Ward Perkins (1967, 80– 81, fig 19a) is adopted here, although no certainly medieval example of Type D is yet known. The details about the origins of the various types is not repeated below, and mouth-pieces found independently of cheek-pieces are discussed later.

## *Type A*

The ring snaffle is the simplest type of all snaffle bits although unless ring and mouth-piece are attached the former might be incorrectly identified. **L51–52** are complete snaffle bits with unusually shaped jointed mouth-pieces, and with rings of markedly different sizes.

## *Type B*

**L53**, of 12th-century date, has a centrally set loop and arms with out-turned tips.

## *Type C*

This, the most common medieval type of cheek-piece, is found in contexts throughout the medieval period. **L54– 62** exhibit minor differences of form, but the centrally placed, side-set loops are rounded except on **L56**, and the arms have either knobbed, expanded or moulded tips.

## *Type D*

No stratified medieval cheek-piece of this type is yet known, and it is possible that it is a post-medieval development of Type C. The supposed medieval examples (w ard Perkins 1967, 81, 83, fig 20) may all be of later date.

## *Type E*

**L63** is a near complete snaffle bit with flaring cheek-pieces and a jointed mouth-piece which is unusual in having three small rings or collars on each link.

## Mouth-pieces from curb bits and snaffle bits

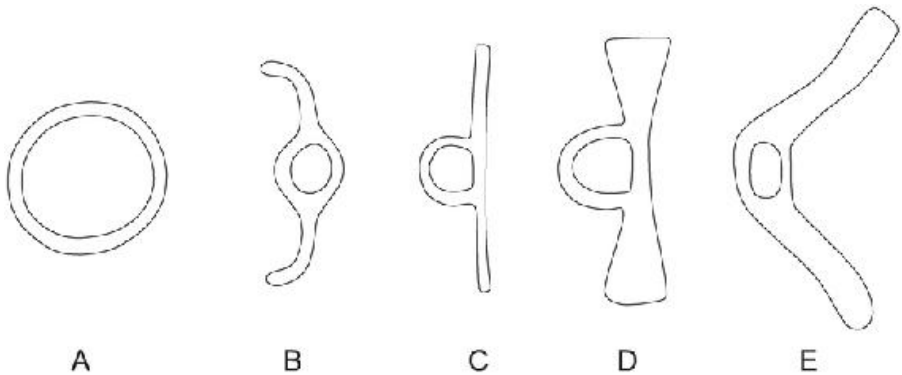



FIGURE 13.2
*Types of medieval bridle bit cheek-piece*

A number of the more complete curb bits and snaffle bits retain their mouth-pieces, but more mouth-piece links are known as isolated finds. The rigid, one-piece mouthpiece is rarely found, curb bit **L47** having the only example. The other sufficiently complete bits, all snaffle bits, have jointed mouth-pieces with either two links, as on **L56** and **L63**, or two links and a central ring (**L49**). **L64** is another two link mouth-pieces, but **L65–73** are all broken single links, as are those on bits **L59**, **L60** and **L62**. The hollow conical mouth-piece found on post-medieval bits, including the early 17th-century curb bit from Basing House, Hampshire (Moorhouse and Goodall 1971, 47–49, fig 21.89), is rarely recognised in medieval contexts, although **L74** is an example.

## Curb chains

Chains fitted between the upper loops of curb bits passed behind the lower jaw of the horse and exerted pressure on it when the lower rein was pulled. Modern bits generally have a simple link chain, but medieval chains sometimes incorporated a curved, U-sectioned fitting such as **L75–77**. These fittings were used in conjunction with links like **L78**, as **L75** and **L77** demonstrate, and others like **L79**. The latter link resembles one through the upper loop of an

early 17th-century bit from Basing House, Hampshire (Moorhouse and Goodall 1971, 47–49).

## 13.6 Bridle Bosses

The junction between mouth-piece and cheek-piece on the more elaborate curb bits was sometimes hidden by a bridle boss of iron or copper alloy, and cheek-piece **L50** has a hole between its two upper loops which may have held the mount for such a boss. The early 17th-century curb bit from Basing House, Hampshire (Moorhouse and Goodall 1971, 47–49) retains one form of mount. **L80–82** are iron bridle bosses, all probably secured by rivets through their flanges. At least two bosses have traces of non-ferrous plating, and all are shaped or decorated in some way. The beaded flange of **L82** recalls a gilt copper-alloy boss from Goltho, Lincolnshire (Goodall 1975a, 95, fig 44.38).

## 13.7 Harness Fittings

Buckles formed part of both the bridle and saddle, enabling each to be adjusted, and other iron fittings also have a place in the bridle.

### Strap links

Viking or late Saxon bridle bits were sometimes linked to the reins by double-looped strap links similar to **L83– 87**, as a complete bit from York indicates (Waterman 1959b, 74–75, fig 8.1). **L84–86** are from 11th to 12thcentury contexts, and unless residual as **L87** probably is, they imply that the type may have continued in use into the very early medieval period.

**L88** may have been used as a link between the headstall straps which kept the bit in place; this may be an alternative use for some of the other strap links.

### Strap loops and distributors

Strap loops with extended, riveted plates were used to join straps to cheek-

pieces, and to items of dress such as belts, as well as to support swivel fittings or simply to join straps together.

**L89–97** are large strap loops, **L97** U-shaped but the others looped, and any or all could be from harness, as are a pair on a snaffle bit from London (Ward Perkins 1967, 83, fig 21.3). The smaller strap loops **L98–100**, particularly the decorated gilt example **L98**, are more probably personal objects. **L101** comprises a pair of strap loops evidently joining two straps together, a function also performed by the strap distributor **L102**. **L013–104** are other strap distributors, unless **L104** is the circular Type A cheek-piece of a snaffle bit. The ring, though small, is not unlike that of the ring snaffle **L52**.

### Looped strap guides

Few medieval curb bits retain any of their smaller associated fittings, but two Continental examples (Ward Perkins 1967, 79, fig 18.1, 2) retain looped strap guides similar to **L105–111** in their cheek-pieces. The hooked ends of these guides were attached to the bit, and the leather harness strap passed freely through the loop.

### Swivel fittings

Harness incorporated various elements which had to be free to move about loosely and independently, and if strap loops or guides did not provide sufficient freedom, swivel fittings were employed. **L112–116** may be from harness, certainly none of those with a swivel hook and ring is robust enough to be from a cauldron chain.

### Harness pendants

Elaborate pendant fittings were an important part of the finer sets of horse equipment, but the pendants and their mounts are usually of copper alloy (Ward Perkins 1967, 118–122). **L117–118** are circular hooked iron pendants, both with non-ferrous plating.

## 13.8 Stirrups

Stirrups are probably the least well represented item of medieval horse equipment, although iron stirrups **L119– 124** and the few additional copper-alloy examples do enable an outline development sequence to be described.

Ward Perkins (1967, 86–87) describes the types of stirrups in use during the Viking period, and notes that representations of early medieval stirrups are sufficient only to show that both loop-stirrups and squared forms with flattened foot-rests were current. Iron stirrups **L119–122** are either examples or developments of these types, **L119** of 11th to early 12th-century date and closely resembling Viking types with its boss and twisted round loop for the stirrup-leather. **L120**, of 13th-century date, is broadly similar in shape although it has lost its loop, whereas the later stirrups **L121–122** exhibit the developed rounded body with integrated loop which may be typical of the 13th and 14th centuries. The squat, rounded shape of **L122** developed into the trapezoidal shape of the later medieval period. **L123** is of this latter shape, but is not closely dated, but of three similar copper-alloy stirrups from East Haddlesey, North Yorkshire (Goodall 1973b, 91, fig 36.1–2a, b), one is unstratified and the other two probably 15th or early 16th century. The asymmetrical form of **L124**, from a 16th-century context, is known from 14th-century sites on the Continent (Ward Perkins 1967, 89, fig 23.9–10).

**L1 HORSESHOE**
Goltho Manor, Lincolnshire.
11th century.
Complete. W 101mm.
Goodall 1987, fig 160.155.

**L2 HORSESHOE**
Goltho Manor, Lincolnshire.
*c*1100–1150.
Complete. W 107mm.
Goodall 1987, fig 160.156.

**L3 HORSESHOE**
Winchester, Hampshire.
Late 11th to 12th century.
One arm damaged. W 94mm.
Goodall 1990-25, fig 340.3945 [Goodall 1980 says BSSC 3888].

**L4 HORSESHOE**
Winchester, Hampshire.
12th–early 13th century.
Complete. One arm broader than other. W 110mm.

Goodall 1990-25, fig 340.3953.

**L5 HORSESHOE**
Winchester, Hampshire.
Late 12th–?early 13th century.
Toe damaged. W 99mm.
Goodall 1990-25, fig 340.3951.

**L6 HORSESHOE**
Dover Castle, Kent.
Mid 13th century.
Complete. W 100mm.
Rigold 1967, 109, fig 9.Fe6.

**L7 HORSESHOE**
Winchester, Hampshire.
Mid to late 13th century.
One arm damaged. W 95mm.
Goodall 1990-25, fig 341.3959.

**L8 HORSESHOE**
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. W 99mm.
Glenn 1915, fig 10.

**L9 HORSESHOE**
Rhuddlan, Clwyd.
End 13th century.
Complete. W 104mm.
Goodall 1994, fig 17.7, no. 108.

**L10 HORSESHOE**
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. W 102mm.
Glenn 1915, fig 10.

**L11 HORSESHOE**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Complete. W 104mm.

Butler 1974, 97, fig 8.9.

**L12 HORSESHOE**
Brandon Castle, Warwickshire.
13th century.
Complete. W 106mm.
Chatwin 1955, 81, fig 11.6.

**L13 HORSESHOE**
Rhuddlan, Clwyd.
1280s.
Complete. W 113mm.
Goodall 1994, fig 17.7, no. 116.

**L14 HORSESHOE**
Rhuddlan, Clwyd.
1280s.
Complete. W 100mm.
Goodall 1994, fig 17.7, no. 117.

**L15 HORSESHOE**
London.
Late 13th–mid 14th century.
Complete. W 114mm.
Henig 1974, 191, fig 38.61.

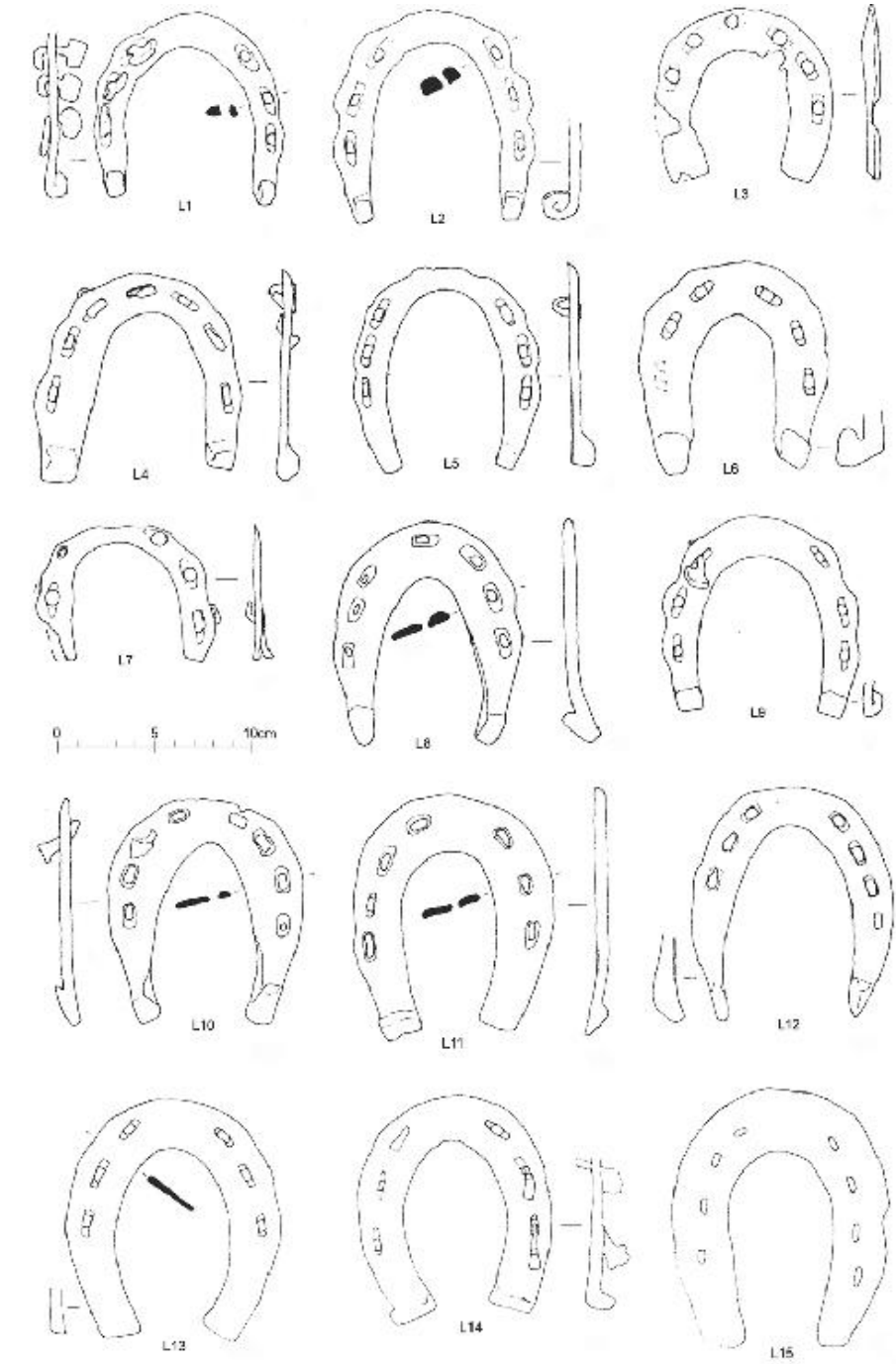



FIGURE 13.3
*Horseshoes*

**L16 HORSESHOE**

London.
Late 13th–mid 14th century.
One arm broken. W 93mm.
Henig 1974, 191, no. 63.

**L17 HORSESHOE**
Seacourt, Oxfordshire.
14th century.
Complete. W 100mm.
Biddle 1961–62, 179, fig 30.18, scale 1:4, not 1:3.

**L18 HORSESHOE**
Winchester, Hampshire.
14th century.
Arms damaged. W 124mm.
Goodall 1990-25, fig 342.3967 [Goodall 1980 says CG 2714].

**L19 HORSESHOE**
Oxford.
*c*1325–*c*1400.
Complete. WL 109mm.
Goodall 1977e, 148, fig 29.59.

**L20 HORSESHOE**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Complete. W 113mm.
Macdonald and Laing 1974–75, 146–147, fig 10.9.

**L21 HORSESHOE**
Cambokeels, Durham.
Later 14th to early 16th century.
Complete. W 105mm.
Hildyard 1949, 195, fig 3.13.

**L22 HORSESHOE**
Cambokeels, Durham.
Later 14th to early 16th century.
One arm broken. W 106mm.
Hildyard and Charlton 1947, 193, fig 3.1.
Bowes Museum, Barnard Castle.

**L23 HORSESHOE**
Huish, Wiltshire.
In hearth of smithy, burnt in mid 15th century.
Complete. W 98mm.
Shortt 1972, 124, fig 6.41.

**L24 HORSESHOE**
Winchester, Hampshire.
Mid 15th century.
One arm and toe damaged. W 105mm.
Goodall 1990-25, fig 342.3968.

**L25 HORSESHOE**
Ospringe, Kent.
*c*1483–1550.
One arm broken. W 81mm.
Goodall 1979c, 132, fig 22.102.

**L26 HORSESHOE**
Alvechurch, Hereford and Worcester.
*c*1500.
Toe worn. W 113mm.
Oswald 1954, 9, pl 5.14.

**L27 HORSESHOE**
Alvechurch, Hereford and Worcester.
*c*1500.
Toe worn. W 110mm.
Oswald 1954, 9, pl 5.14.

**L28 HORSESHOE**
Southampton, Hampshire.
16th century.
One arm damaged. W 118mm.
Harvey 1975b, 287, fig 257.2104.

**L29 OXSHOE**
Eynsford Castle, Kent.
First half 13th century.
Complete. L 111mm.
Rigold and Fleming 1973, 105, fig 9.11.

**L30 OXSHOE**
Hangleton, West Sussex.
14th–15th century.
Broken. L 79mm.
Holden 1963, 173, fig 38.7.

**L31 OXSHOE**
London.
Late 15th–early 16th century.
Complete. L 112mm.
Excavated by F C Willmot. Site at 66 Foyle Road.

**L32 OXSHOE**
Waltham Abbey, Essex.
13th and 16th century.
Clip broken. L 86mm.
Goodall 1973a, 171, fig 12.38.

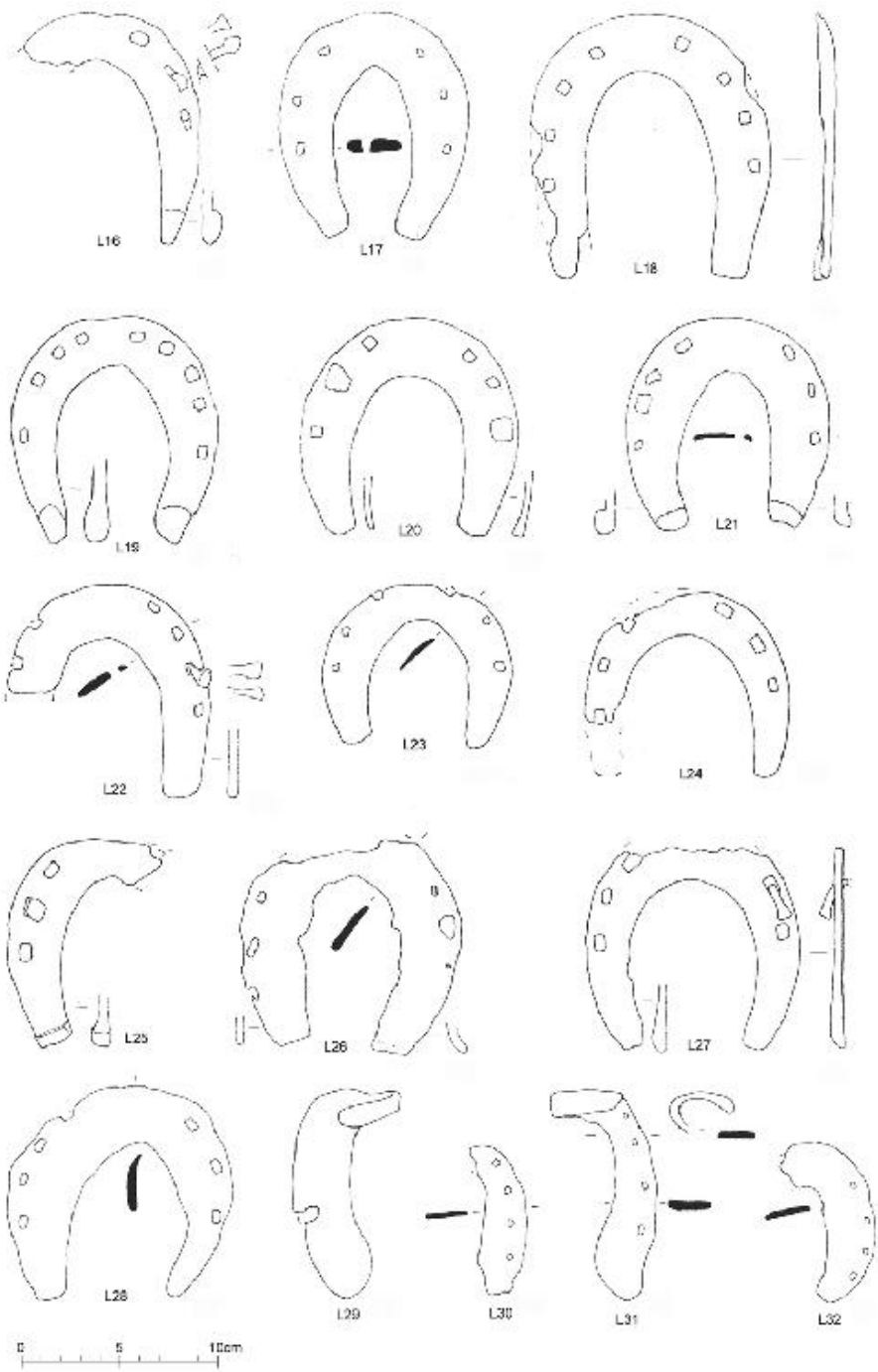



FIGURE 13.4
*Horseshoes*

**L33 CURRY-COMB**

Southampton, Hampshire.
1300–50.
Curry-comb with two-armed handle riveted to U-shaped comb. Broken tang retains part of former wooden handle. Comb incomplete.
L 182mm, W 176mm.
Harvey 1975b, 282, fig 254.1049.

**L34 CURRY-COMB**
Thuxton, Norfolk.
Site: 12th–14th century.
U-shaped comb fragment with rivet from handle. W 130mm.
Excavated by L A S Butler.

**L35 CURRY-COMB**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Curry-comb with two-armed handle riveted to U-shaped comb. Comb near complete, handle tang broken. Two loose rings on handle arms. L 95mm, W 165mm.
Goodall 1979a, 121, fig 63.65.

**L36 CURRY-COMB**
Oxford.
Mid 16th century.
Fragment of incomplete and distorted U-shaped comb with part of three-armed handle. W 97mm.
Excavated by N Palmer.

**L37 CURRY-COMB HANDLE**
Winchester, Hampshire.
13th to early 14th century.
Two-armed handle, near complete. L 165mm.
Goodall 1990-24, fig 338.3936.

**L38 CURRY-COMB HANDLE**
(not illustrated)
Winchester, Hampshire.
Late 12th century.
Two arms and tang broken. L 65mm.
Goodall 1990-24, 1053, no. 3934.

**L39 CURRY-COMB HANDLE**

Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Two-armed handle, complete. L 128mm.
National Museum of Wales, Cardiff, 21–24/1957. For site see Butler 1974.

**L40 CURRY-COMB HANDLE**
Oxford.
*c*1325–*c*1400.
Incomplete two-armed handle. L 68mm.
Goodall 1977e, 148, fig 29.67.

**L41 CURRY-COMB HANDLE**
Winchester, Hampshire.
14th century.
Incomplete three-armed handle. L 103mm.
Goodall 1990-24, fig 338.3938.

**L42 CURRY-COMB HANDLE**
The Mount, Princes Risborough, Buckinghamshire. 14th, early 15th century.
Three-armed handle, near complete, with fragments of former U-shaped comb riveted to undersides of terminals, not to split terminals as published. L 119mm.
Pavry and Knocker 1953–60, 161, fig 12.5.

**L43 CURRY-COMB HANDLE**
West Hartburn, Durham.
16th century.
Near complete, distorted three-armed handle. L 149mm.
Excavated by L Still.

**L44 CURRY-COMB HANDLE**
Winchester, Hampshire.
Late 15th–early 16th century.
Three-armed handle, incomplete, with loos ring on central arm. L 106mm.
Goodall 1990-24, fig 338.3937.

**L45 CURRY-COMB HANDLE**
Waltham Abbey, Essex.
16th century.
Incomplete three-armed handle. L 90mm.
Goodall 1973a, 171, fig 12.39.

**L46 CURRY-COMB HANDLE**
King's Lynn, Norfolk
*c*1350–1500.
Riveted arm from handle. L 95mm.
Goodall and Carter 1977, 295, fig 134.47.

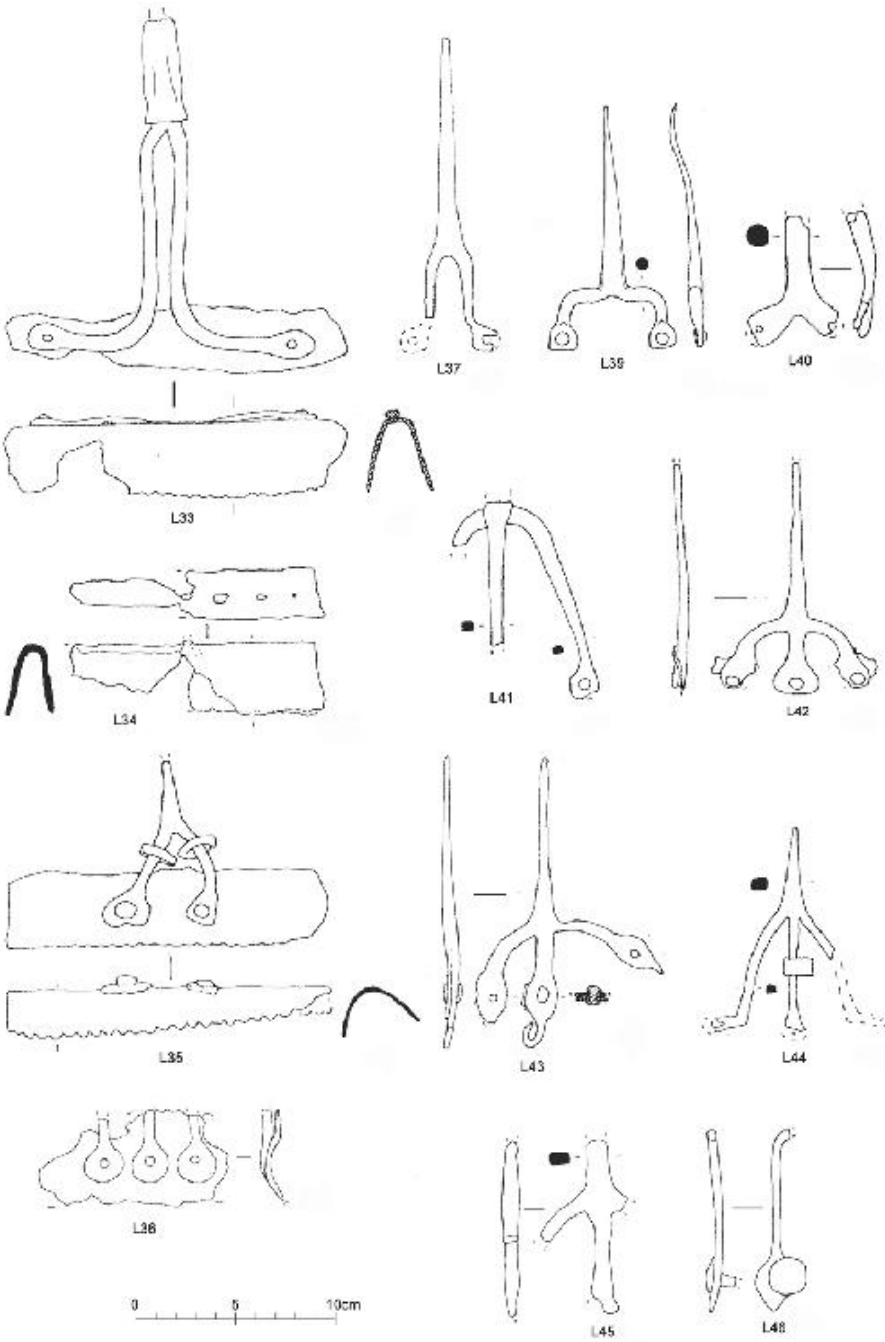


FIGURE 13.5
*Curry-combs*

**L47 CURB BIT**
Sulgrave, Northamptonshire.
Second half 11th century, possibly just post-Conquest.
Incomplete curb bit. W 125mm.
Excavated by B K Davison.

**L48 CURB BIT**
King's Lynn, Norfolk.
Late 11th century.
Bar with side arms terminating in swivel bosses. Non-ferrous plating. W 119mm.
Goodall and Carter 1977, 295, fig 143.44.

**L49 CURB BIT**
Weoley Castle, Birmingham, West Midlands.
*c*1400–50.
Jointed mouth-piece complete, cheek-piece near complete. W 104mm, L 151mm.
Taylor 1974. For site see Oswald 1962.

**L50 CHEEK-PIECE**
Somerby, Lincolnshire.
15th to mid 16th century.
Near complete cheek-piece with non-ferrous plating. L 156mm.
Mynard 1969, 81, fig 11.IW 28.

**L51 SNAFFLE BIT**
Lochmaben Castle, Dumfries and Galloway.
Late 14th century.
Complete snaffle bit with jointed mouthpiece, one link end with incised decoration.
W 206mm.
Macdonald and l aing 1974–75, 146, fig 10.1.

**L52 SNAFFLE BIT**
Ospringe, Kent.
*c*1483–1550.
Complete snaffle bit with jointed and twisted mouth-piece. Tinned. W 102mm.

Goodall 1979c, 132, fig 23.111.

**L53 CHEEK-PIECE**
Weaverthorpe, North Yorkshire.
12th century.
Complete. L 96mm.
Brewster 1972, 132, fig 14.A.

**L54 SNAFFLE BIT**
Lyveden, Northamptonshire.
Site: *c*1150–*c*1350.
Broken knobbed cheek-piece and link from jointed mouth-piece. W 91mm.
Steane and Bryant 1975, 127–128, fig 48.105.

**L55 CHEEK-PIECE**
Lyveden, Northamptonshire.
Site: *c*1150–*c*1350.
Broken, knobbed cheek-piece. L 86mm.
Steane and Bryant 1975, 128, fig 48.107.

**L56 SNAFFLE BIT**
Criccieth Castle, Gwynedd.
Site: *c*1230 –1404.
Complete snaffle bit with jointed mouthpiece. W 190mm.
O'Neil 1944–45, 41, pl IX.1.

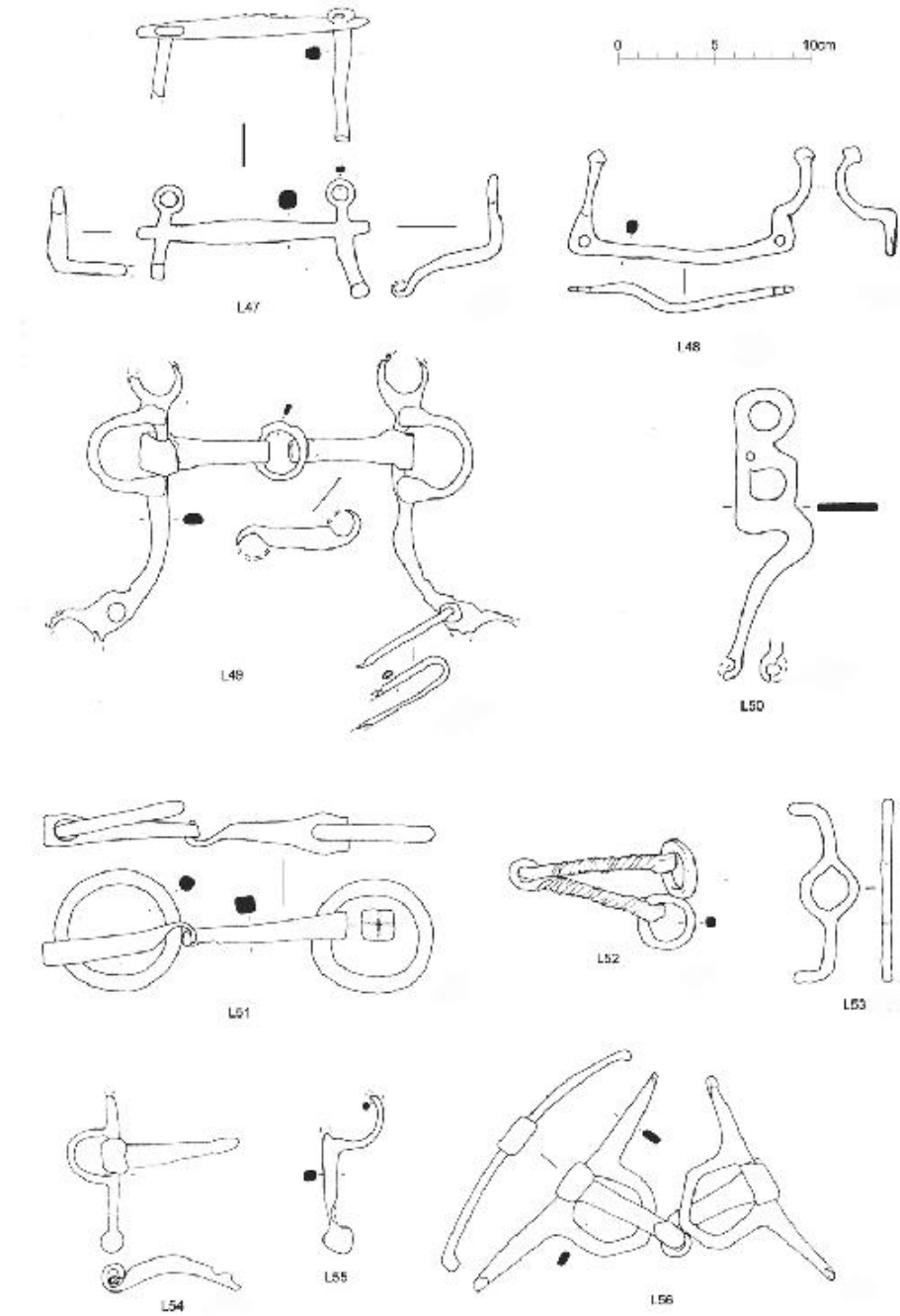



FIGURE 13.6
*Bridle bits*

**L57 CHEEK-PIECE**
Somerby, lincolnshire.

15th to mid 16th century.
Knobbed terminals. Non-ferrous plating.
L 157mm.
Mynard 1969, 82, fig 11.IW 47.

**L58 CHEEK-PIECE**
Newbury, Berkshire.
*c*1470–1510.
Broken and distorted cheek-piece with knobbed terminal. L 83mm.
Goodall 1997, fig 22, no. 56.

**L59 SNAFFLE BIT**
Ospringe, Kent.
*c*1483–1550.
Cheek-piece and link from jointed mouth-piece. Tinned. W 55mm.
Goodall 1979c, 132, fig 23.110.

**L60 SNAFFLE BIT**
Rest Park, North Yorkshire.
15th–16th century.
Cheek-piece and link from jointed mouth-piece. W 114mm.
Goodall 1973b, 93, fig 36.3.

**L61 CHEEK-PIECE**
West Hartburn, Durham.
Medieval to later 16th century.
Complete. L 149mm.
Still and Pallister 1967, 146, fig 4.5.

**L62 SNAFFLE BIT**
West Hartburn, Durham.
13th–16th century.
Cheek-piece and broken link from jointed mouth-piece. W 85mm.
Still and Pallister 1964, 200, fig 6.21.

**L63 SNAFFLE BIT**
Weoley Castle, Birmingham, West Midlands.
*c*1270–1600.
One cheek-piece incomplete. Jointed mouth-piece, each link with three collars.
W 181mm, L 158mm.
Taylor 1974. For site see Oswald 1962.

**L64 MOUTH-PIECE**
Castell-y-Bere, Gwynedd.
Site: *c*1221–95.
Jointed mouth-piece. W 169mm.
Butler 1974, 97, no. 8A.

**L65 MOUTH-PIECE**
Llantrithyd, South Glamorgan.
Early to mid 12th century.
Broken link from jointed mouth-piece.
W 64mm.
Goodall 1977f, 48, iron object fig 3.62.

**L66 MOUTH-PIECE**
Winchester, Hampshire.
12th–mid 13th century.
Broken link from jointed mouth-piece.
W 73mm.
Goodall 1990-23, fig 334.3889.

**L67 MOUTH-PIECE**
Rhuddlan, Clwyd.
Earlier part 14th century or 1290–1300.
Broken link from jointed mouth-piece.
W 78mm.
Goodall 1994, fig 17.7, no. 135.

**L68 MOUTH-PIECE**
Alsted, Surrey.
*c*1270–1340.
Broken link from jointed mouth-piece.
W 95mm.
Goodall 1976a, 60, fig 36.57.

**L69 MOUTH-PIECE**
Alsted, Surrey.
*c*1250–1405.
Broken link from jointed mouth-piece.
W 113mm.
Goodall 1976a, 60, fig 36.58.

**L70 MOUTH-PIECE**

Brooklands, Weybridge, Surrey.
*c*1150–1325.
Broken link from jointed mouth-piece.
W 106mm.
Goodall 1977d, 73, fig 45.13.

**L71 MOUTH-PIECE**
Lyveden, Northamptonshire.
Site: *c*1150–*c*1350.
Broken link from jointed mouth-piece.
W 78mm.
Steane and Bryant 1975, 128, fig 48.114.

**L72 MOUTH-PIECE**
Bolton, Fangfoss, Humberside.
End 14th to mid 15th century.
Broken link from jointed mouth-piece.
W 125mm.
Goodall 1978b, 143, fig 30.39.

**L73 MOUTH-PIECE**
Wharram Percy, North Yorkshire.
Late 15th to early 16th century.
Broken link from jointed mouth-piece.
W 75mm.
Goodall 1979a, 121, fig 63.66.

**L74 MOUTH-PIECE** (not illustrated)
Waltham Abbey, Essex.
*c*1540.
Hollow conical mouth-piece.
Huggins 1972, 117.

**L75 CURB CHAIN FITTING**
Wallingstones, Hereford and Worcester.
Site: *c*1200–*c*1500.
Broken fitting and figure-eight link.
L 110mm.
Bridgewater 1970–72.

**L76 CURB CHAIN FITTING**
Weoley Castle, Birmingham, West Midlands.

Site: *c*1080–1600.
Broken fitting. L 102mm.
Birmingham City Museum, WC 436. For site see Oswald 1962.

**L77 CURB CHAIN FITTING**
Lyveden, Northamptonshire.
First half 15th century.
Broken fitting and figure-eight link.
L 67mm.
Steane and Bryant 1975, 129, fig 48.128.

**L78 CURB CHAIN LINK**
Lyveden, Northamptonshire.
*c*1350–1450.
Complete. L 40mm.
Steane and Bryant 1975, 129, fig 48.127.

**L79 CURB CHAIN LINK**
South Witham, Lincolnshire.
*c*1220 to 1308–13.
Complete. L 53mm.
Goodall 2002, fig 7.8, no. 85.

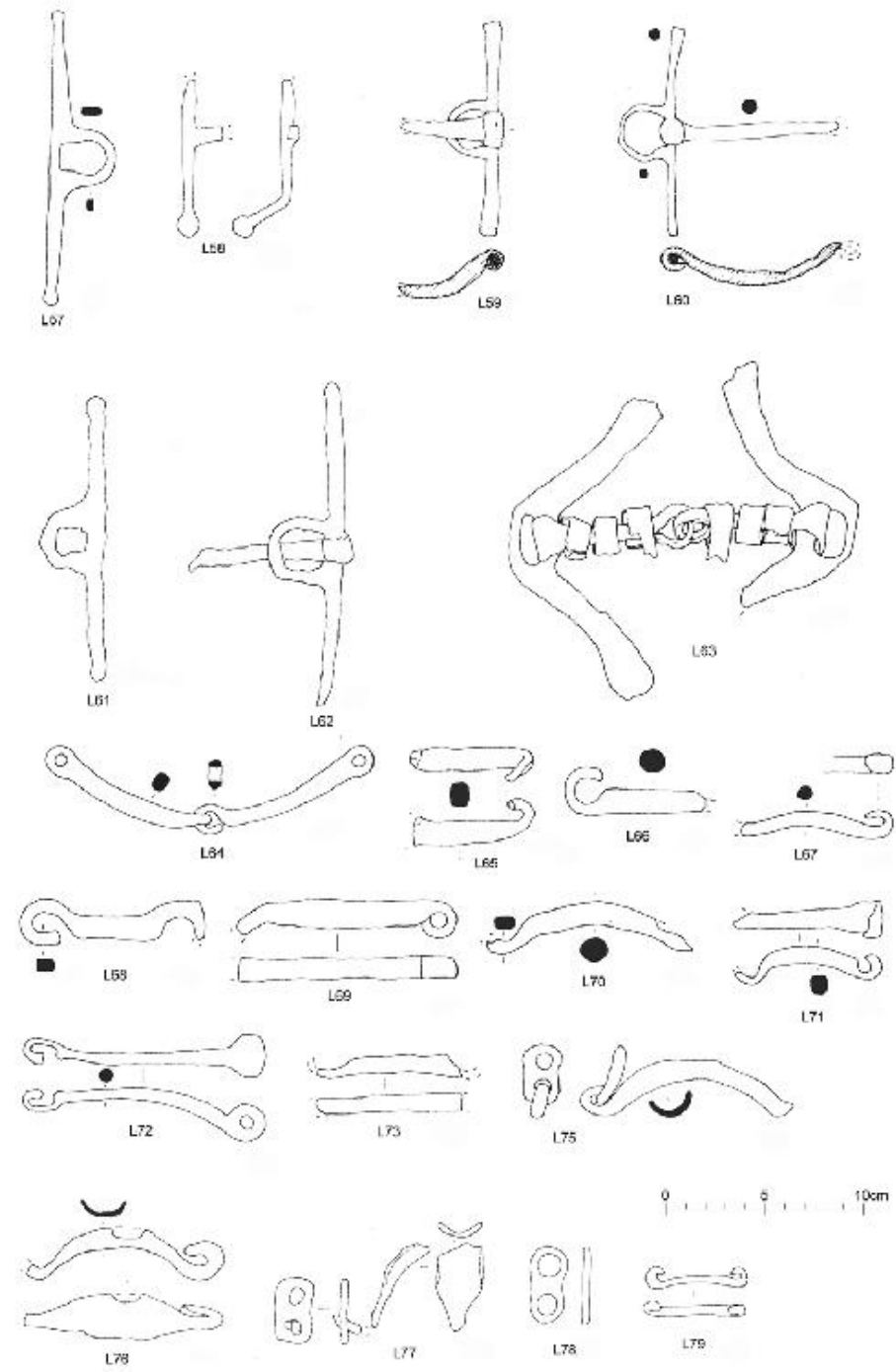



FIGURE 13.7
*Bridle bits*

**L80 BRIDLE BOSS**

King's Lynn, Norfolk.
*c*1250–1300.
Circular boss with flat flange and domed centre. Three holes through flange, filed decoration around edge. Non-ferrous plating. D 55–59mm.
Goodall and Carter 1977, 295, fig 143, 45, pl V.E.

**L81 BRIDLE BOSS**
Badby, Northamptonshire.
Mid to late 14th century.
Circular boss with flat, petalled flange and domed centre. Non-ferrous plating. D 61mm.
Excavated by Mrs M Gray.

**L82 BRIDLE BOSS**
Ospringe, Kent.
Demolition *c*1550–70 on site founded *c*1230.
Circular boss with flange with outer bead and domed, flat-topped centre. Two of original three rivets through flange survive.
D 70mm.
Goodall 1979c, 132, fig 23.114.

**L83 STRAP LINK**
Winchester, Hampshire.
1050–75.
Moulded, flat-backed strap link. Non-ferrous plating. L 81mm.
Goodall 1990-23, fig 334.3882.

**L84 STRAP LINK**
Goltho Manor, Lincolnshire.
11th century.
Flat strap link, punched decoration on loops.
Non-ferrous plating. L 101mm.
Goodall 1987, fig 160.160.

**L85 STRAP LINK**
Walton, Aylesbury, Buckinghamshire.
12th century.
Broken, moulded strap link with non-ferrous plating. L 84mm.
Farley 1976, 267, fig 49.5.

**L86 STRAP LINK**
Winchester, Hampshire.

Early 13th century.
Broken flat strap link. Non-ferrous plating.
L 41mm.
Goodall 1990-23, fig 334.3884.

**L87 STRAP LINK**
Winchester, Hampshire.
14th century, probably residual.
Broken flat strap link. L 100mm.
Goodall 1990-23, fig 334.3885.

**L88 STRAP LINK**
Hambleton Moat, Lincolnshire.
1250–1400.
Broken strap link. L 74mm.
Butler 1963, 65, fig 14.6.

**L89 STRAP LOOP**
Castle Acre Castle, Norfolk.
After 1066, before *c*1085.
Plates broken. L 35mm.
Goodall 1982, fig 41, no. 122.

**L90 STRAP LOOP**
Castle Acre Castle, Norfolk.
1140s to second half 12th century.
Loop broken. L 44mm.
Goodall 1982, fig 41, no. 124.

**L91 STRAP LOOP**
Winchester, Hampshire.
Late 12th–early 13th century.
Complete. L 44mm.
Goodall 1990-23, fig 334.3895.

**L92 STRAP LOOP**
Dyserth Castle, Clwyd.
Site: 1241–63.
Complete. L 58mm.
Glenn 1915.

**L93 STRAP LOOP**

South Witham, Lincolnshire.
*c*1220 to 1308–13.
Plates broken and distorted. L 49mm.
Goodall 2002.

**L94 STRAP LOOP**
Wroughton Copse, Fyfield Down, Wiltshire.
(Mid?) 13th to early 14th century.
Plates broken. L 42mm.
Excavated by P J Fowler.

**L95 STRAP LOOP**
Winchester, Hampshire.
Second quarter 14th century.
One plate broken. Non-ferrous plating.
L 44mm.
Goodall 1990-23, fig 334.3897.

**L96 STRAP LOOP**
Lyveden, Northamptonshire.
Site: *c*1400.
Complete. L 56mm.
Bryant and Steane 1971, 65, fig 17.0.

**L97 STRAP LOOP**
Winchester, Hampshire.
Early 12th century.
U-shaped strap loop, distorted. L 58mm Goodall 1990-23, fig 334.3894.

**L98 STRAP LOOP**
Waltham Abbey, Essex.
12th century.
Incomplete strap loop with gilt surface decoration. L 25mm.
Excavated by P J Huggins.

**L99 STRAP LOOP**
Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.
Complete. L 21mm.
Excavated by L Helliwell and D G Macleod.

**L100 STRAP LOOP**

Rayleigh Castle, Essex.
Site: *c*1070–*c*1350.
One plate broken. L 38mm.
Excavated by L Helliwell and D G Macleod.

**L101 STRAP LOOP**
Lyveden, Northamptonshire.
Second quarter 13th to very early 14th century.
Pair of broken strap loops. L 51mm.
Bryant and Steane 1971, 61, fig 15f.

**L102 STRAP DISTRIBUTOR**
Wharram Percy, North Yorkshire.
Early 15th century.
Two broken strap loops attached to square link. L 29mm.
Goodall 1979a, 121, fig 63.80.

**L103 STRAP DISTRIBUTOR**
Goltho Manor, Lincolnshire.
Around late 11th century.
Three strap loops attached to ring. L 52mm.
Goodall 1987, fig 160.165.

**L104 RING AND STRAP LOOP**
Castle Acre Castle, Norfolk.
1140s to second half 12th century.
Circular ring and broken strap loop. L 42mm.
Goodall 1982, fig 41, no. 123.

**L105 LOOPED STRAP GUIDE**
Wallingstones, Hereford and Worcester.
First half 13th century.
Complete. L 33mm.
Bridgewater 1970–72, 100, fig 16.9.

**L106 LOOPED STRAP GUIDE**
Lyveden, Northamptonshire.
*c*1350–1450.
Complete. L 28mm.
Steane and Bryant 1975, 129, fig 48.134.

**L107 LOOPED STRAP GUIDE**

Goltho, Lincolnshire.
Croft A: late Saxon to late 14th or early 15th century.
Complete. Non-ferrous plating. L 41mm.
Goodall 1975a, 89, fig 42.129.

**L108 LOOPED STRAP GUIDE**
Lyveden, Northamptonshire.
1475–1500.
Complete. L 36mm.
Steane and Bryant 1975, 129, fig 48.135.

**L109 LOOPED STRAP GUIDE**
Northampton.
*c*1250 to end 14th century.
Loop broken. L 52mm.
Goodall *et al* 1979, 273, fig 120.103.

**L110 LOOPED STRAP GUIDE**
Wintringham, Cambridgeshire.
Mid 13th century.
Complete. L 65mm.
Goodall 1977a, 258, fig 46.81.

**L111 LOOPED STRAP GUIDE**
Cambokeels, Durham.
Later 14th to early 16th century.
Complete. L 63mm.
Hildyard 1949, 195, fig 4.8.

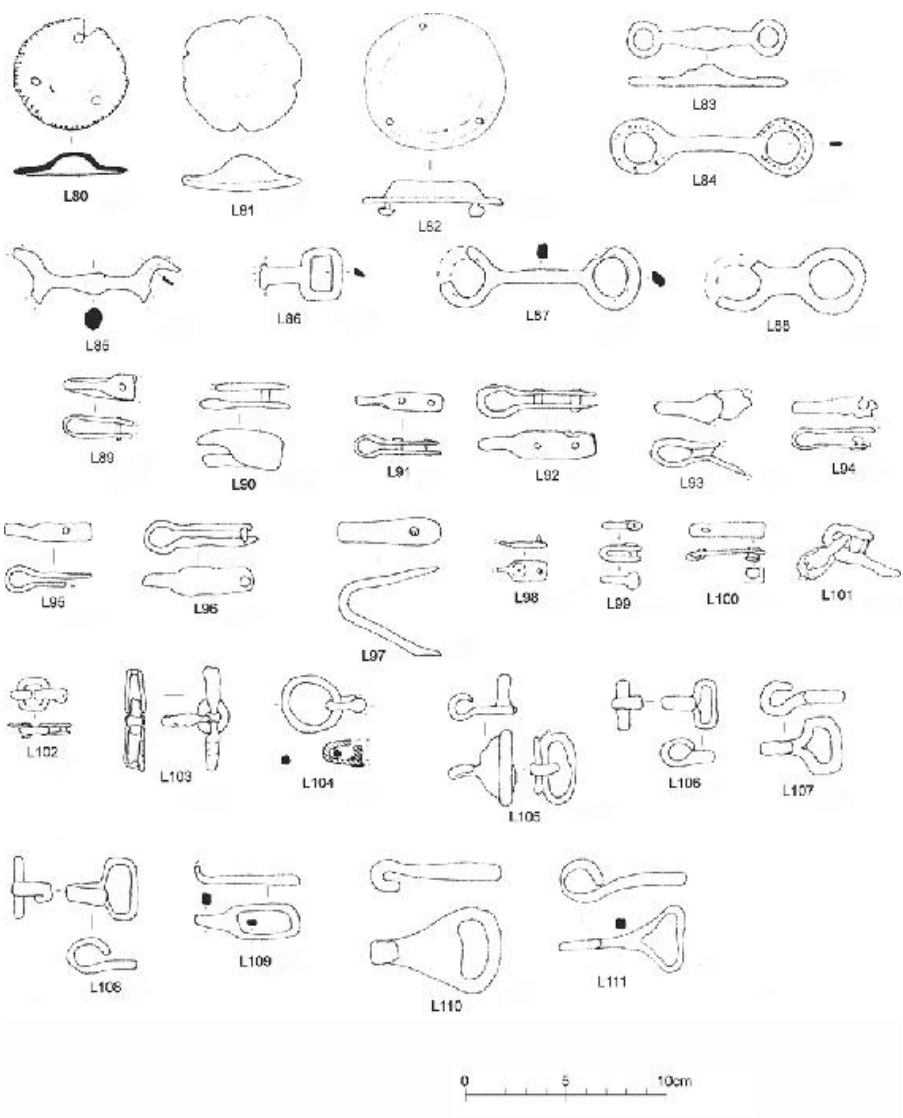



FIGURE 13.8 *Bridle bosses and harness fittings*

**L112 SWIVEL FITTING**
Dyserth Castle, Clwyd.
Site: 1241–63.
Incomplete link, oval flat link and swivel hook and rink. L 91mm.
Glenn 1915.

**L113 SWIVEL FITTING**
London.
14th century.
Oval link with swivel hook and ring and two looped fittings riveted to the

ends of leather straps. Overall L 100mm.
Henig 1974, 191, fig 38.65.

**L114 SWIVEL FITTING**
Newbury, Berkshire.
*c*1320–50.
Strap loop with swivel hook and ring.
L 36mm.
Goodall 1997, fig 22, no. 57.

**L115 SWIVEL FITTING**
Ospringe, Kent.
*c*1483–1550.
Strap guide with cylinder and a pair of
S-links and swivel hooks. L 90mm.
Goodall 1979c, 132, fig 23.115.

**L116 SWIVEL FITTING**
Winchester, Hampshire.
1220–75.
Shaped, perforated fitting with two swivel bosses. W 58mm.
Goodall 1990-23, fig 334.3900.

**L117 HARNESS PENDANT**
South W itham, Lincolnshire.
Late 13th century to 1308–13.
Hooked pendant with non-ferrous plating.
L 51mm.
Goodall 2002, fig 7.8, no. 86.

**L118 HARNESS PENDANT**
Lyveden, Northamptonshire.
*c*1200–1350.
Hooked pendant with non-ferrous plating.
L 37mm.
Steane and Bryant 1975, 127, fig 48.104.

**L119 STIRRUP**
Gloucester.
11th to early 12th century.
Semicircular-shaped stirrup with
D-sectioned sides, flattened and expanded foot-rest, and broken loop for

stirrup leather set at right angles to the body and separated from it by a boss. W 100mm.

Excavated by H Hurst.

**L120 STIRRUP**

Rabley Heath, Knebworth, Hertfordshire.

13th century.

Squat triangular-shaped stirrup with ex-panded and pierced foot-rest. Loop for stirrup leather lost. Traces of silver plating on side. W 120mm.

Andrews and Dunning 1939, 303–305, fig 2.

**L121 STIRRUP**

South Witham, Lincolnshire.

Late 13th century to 1308–13.

Broken roughly circular stirrup. W 83mm.

Goodall 2002, fig 7.8, no. 84.

**L122 STIRRUP**

West Hartburn, Durham.

13th to 16th century.

Squat rounded stirrup with flattened and expanded foot-rest and rectangular box for stirrup leather. W 128mm.

Still and Pallister 1964, 197, fig 6.20.

**L123 STIRRUP**

North Elmham Park, Norfolk.

*c*1150 –*c*1600.

Trapezoidal stirrup with sides widening toward base. Broad, curved foot-rest, rectangular studded box for stirrup leather.

W 114mm.

Goodall 1980a, 516, fig 267.116.

**L124 STIRRUP**

Winchester, Hampshire.

Mid 16th–late 17th century.

Asymmetrical body with expanded foot-rest and rectangular box for stirrup leather with suspension bar. W 105mm.

Goodall 1990-22, fig 332.3879.

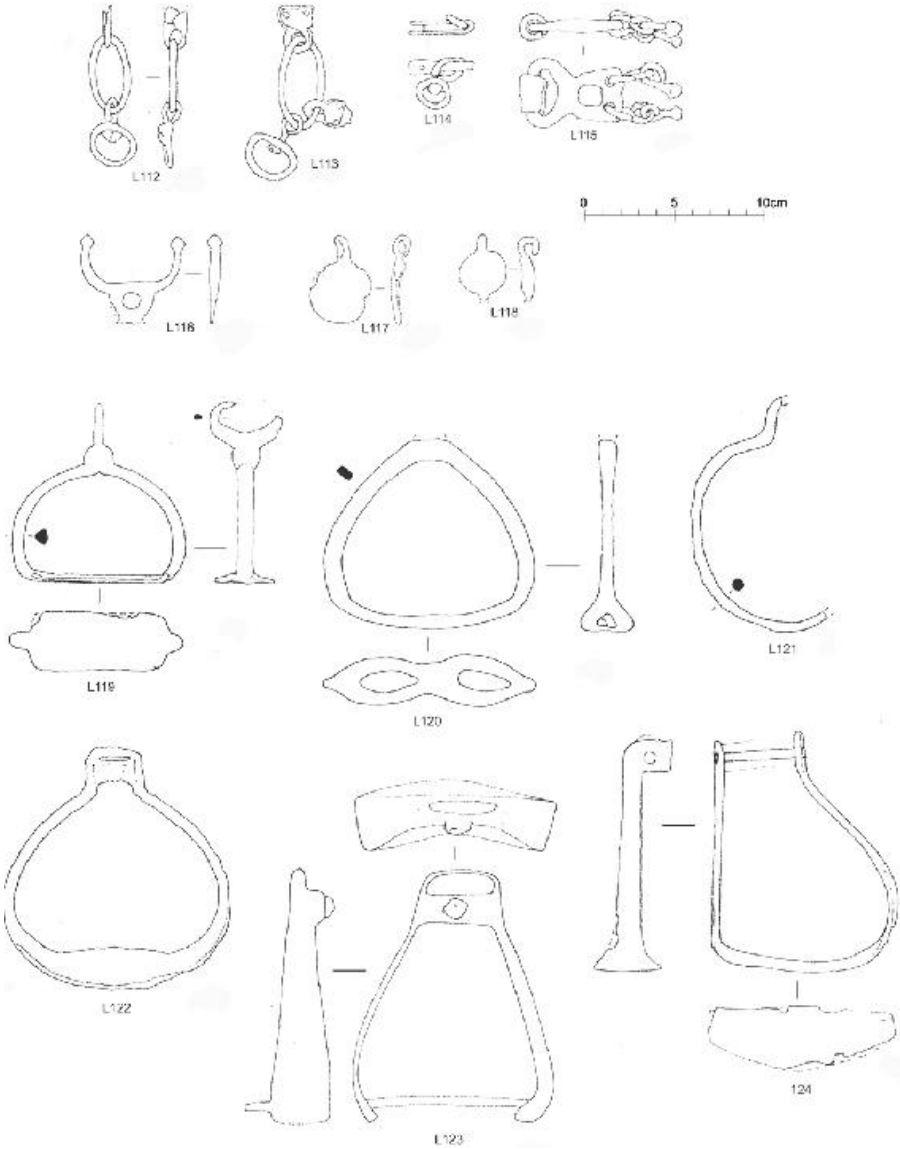



FIGURE 13.9 *Bridle bosses, harness fittings and stirrups*

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